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EXECUTIVE SUMMARY

# LANDSCAPE ANALYSIS
## LARGE-SCALE FOOD FORTIFICATION (LSFF) IN INDONESIA

## BACKGROUND

Indonesia is implementing mandatory salt, wheat flour and palm cooking oil fortification. High-level political commitment to LSFF has been demonstrated in the form of mandatory legislation and a variety of supportive regulations have created an enabling environment for LSFF leading to the fortification of significant proportions of these staple foods and condiments. However, **constraints have been experienced in the implementation of LSFF, potentially as a result of inadequate coordination and oversight. These constraints are potentially also the reason that fortification does not appear to have contributed to a reduction in the prevalence of anaemia and pregnant women in the poorest quintiles remain iodine deficient**. In order to strengthen food fortification implementation, the National Development Planning Agency (BAPPENAS) is in the process of establishing a coordination Forum, has commissioned this Landscape Analysis and initiated the development of a national strategy.


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## OBJECTIVES

The objective of this Landscape Analysis is to identify gaps and challenges in the implementation of LSFF in Indonesia. It is based on a theory of change for LSFF which recognizes the important respective roles of government and the food industry and **the principal that LSFF is most effectively and sustainably implemented if integrated into national food legislation, production and control systems and national public health monitoring systems.** Findings are presented by key components of a successful LSFF interventions, including coordination, management and oversight. However, implementation to date and the opportunities for expanded implementation of rice fortification are presented separately because rice fortification is not mandatorily fortified at this time.

## KEY FINDINGS

National Requirement and Consumption Pattern

National requirements for salt, wheat flour and palm cooking oil are increasing with Indonesia's growing population. The national requirement for rice has fallen however as the diet of the population has diversified and wheat flour consumption has increased. A majority of salt and wheat flour are now consumed as processed foods. Data on consumption of palm cooking oil varies significantly, potentially because a substantial amount is used as a cooking medium but is not actually consumed. While the cooking oil and wheat flour industries are characterized by large, sophisticated facilities with high potential for quality fortification, a substantial proportion of rice (rough estimate 60%) and salt (approximately 30%) is still processed in small facilities with low potential to fortify. In 2022, a national policy to develop the salt industry was issued and the People's Cooking Oil Programme was launched; both have the potential to impact mandatory food fortification.

Legislation and Standard

The fortification of cooking oil, salt and wheat flour are mandated in Indonesia. Fortification requirements are indicated in national standards (SNI) and Ministry of Industry (MoI) regulations make them mandatory and assign a certification body. As such, fortification legislation is completely integrated into the food legislation system. The legislative framework for salt fortification is complex, confusing and incomplete however. Although the SNI for iodized consumption salt was updated in 2016, it has not yet been made mandatory and a certification body has not been assigned. Regulations from different sectors on the requirement to use iodized salt in the manufacture of processed foods are contradictory. In contrast, the legislative framework for fortified wheat flour is relatively clear and complete. Fortification requirements are indicated in SNI 3751, which was updated in 2018 to specify iron compounds; supporting regulations were issued in 2021. However, the revised fortification requirements have not followed World Health Organization (WHO) recommendations for levels of iron, zinc and folic acid and the justification and reasoning for this decision is unclear.

The legislative framework for the fortification of cooking oil is the most simple and complete. Fortification requirements are indicated in SNI 7709: 2012 and 2019 and both have been made mandatory and certification bodies have been appointed. Additional Ministry of Trade regulations have sought to require the packaging of household oil, which facilitates fortification. There is no requirement to fortify rice because of the significant amounts thought to be milled by small scale millers without the capacity to fortify. However fortified rice is recognized in National Food Agency (NFA) Regulation 2/2023 on Rice Quality and Labelling Standards. SNIs for fortified rice and fortified rice kernels are under development.

The majority of all the mandatorily fortified foods are appropriately fortified and the majority of food producers have no difficulties in fortification. Fortification has become the norm and consumption of fortified salt, wheat flour and palm cooking oil is widespread. Quality fortified wheat flour is easily produced by Indonesia's large industrial-scale mills. Around 80% is sold to large and small food processors making wheat flour products such as noodles and bread. In 2021 when the SNI for wheat flour was updated to specify allowed iron compounds, some of the small processors complained that the new iron compound caused black spots; but the spots were eventually determined to be due to an interaction with another additive. SNI 7709 requires all cooking oil to be fortified and packaged.

This has led to the misperception that only packaged oil needs to be fortified. Since the 2022 People's Cooking Oil programme however, almost all household oil is now packaged, facilitating fortification. Some vitamin A is lost during distribution, but local studies indicate 61% of vitamin A remains in the oil at the household. Salt is iodized by salt processors refining raw salt. A significant proportion of Indonesian salt is still processed by small and medium scale processors and may not be adequately iodized. And some raw salt, that is not purchased by processors because of low quality, may end up in markets as non-iodized salt. However large-scale processors are easily able to produce quality iodized salt. Fortified rice is currently made in Indonesia by a small number of large-scale millers, including BULOG (Badan Urusan Logistik/ Food Logistics Agency), using locally produced or imported fortified rice kernels. Greater production of fortified rice is limited by lack of demand. NFA's Rice Food Aid programme will address this limitation and encourage rice millers to undertake necessary investments to produce fortified rice.

## Regulatory Monitoring

Regulatory monitoring for enforcement of fortification is integrated into the food control system. External monitoring at production level is undertaken by National Agency of Drug and Food Control (Badan Pengawas Obat dan Makanan/ BPOM) and MoI through processes to issue various facility and product certificates and licenses. Commercial monitoring is undertaken principally by BPOM in markets. These results are published and indicate compliance for all foods around 80% or greater. Some weaknesses and gaps in the current regulatory monitoring system include apparently excessive and duplicative facility and product inspections by BPOM and MoI with lack of coordination between the two, insufficient accredited and authorized agencies to undertake all the required inspections in a timely manner, over reliance on product testing and market surveillance, no system for ensuring the use of fortified ingredients in processed foods and no solution for small scale salt processors that are unable to achieve SNI certification, be issued with a registration number for local food product (Makanan Dalam Negeri/MD) license or apply for Home Industry Food (Pangan Industri Rumah Tangga/PIRT).

## Assessment of Coverage and Impact

Indonesia has very limited data on either coverage or impact of fortified food. This is despite the fact that there have been numerous occasions to collect such data through routine and regular household health and/or expenditure surveys. The lack of data appears to be due to insufficient prioritization of need to have such data for programme evaluation and improvement and potentially also lack of coordination to make best use of limited opportunities and resources. Since the last assessment of household coverage of iodized salt in 2013, there have been no assessments of coverage of any of the fortified foods. Vitamin A is the only micronutrient being assessed by Indonesian Health Survey (SKI) 2023.

## Potential for Rice Fortification

There is a high level of interest in large-scale fortification of rice in Indonesia recognizing that rice is the staple food of the country and Indonesia is almost self-sufficient in rice. However logistical, technical, and financial constraints have limited large-scale rice fortification. Considering the fragmented structure of the rice milling industry, the most promising strategy for achieving large scale rice fortification appears to be through a social safety net programme that is purchasing and distributing rice to segments of the population that have low micronutrient status. In mid-2023, the newly formed National Food Agency started a rice distribution programme called Bantuan Pangan Beras (Rice Food Aid) that will distribute 639 million kilograms of rice to 21.353 million beneficiary families who were formerly beneficiaries of the nine staple foods (SEMBAKO) cash subsidy programme which replaced the Beras Sejahtera/ RASTRA (Rice for the Prosperous Population Programme) rice distribution programme. The NFA plans for this rice to be fortified. This NFA programme offers the best opportunity for large scale rice fortification in Indonesia, but it will be important to learn lessons from former rice distribution programmes; specifically, Beras Sejahtera/ RASTRA (Rice for the Prosperous Population Programme) and RASTRA.

## RECOMMENDATIONS

Recommendations on improving the implementation of LSFF in Indonesia are organized by the same programme components headings that have been used to present the key findings of the Landscape Analysis and are presented in in Section 5 of the full report 'Landscape Analysis of Large-Scale Food Fortification in Indonesia'. The most important recommendations under each programme component heading are:

- **Coordination, Management and Oversight:** Commission a series of focus group discussions and review of relevant regulations to map roles and responsibilities of various ministries, directorates within ministries and other relevant government agencies. The objective of the review is to identify gaps and overlaps in roles and responsibilities and to ensure alignment in the principals of government support to and implementation of fortification. Use the results to increase the accountability of stakeholders to fulfil their agreed upon mandates and roles with regards to fortification

- **Legislation, Regulations and Standards:** Commission a review of food fortification legislation in the context of Indonesia's food legislative system. The objectives would be to look for opportunities for simplification and standardization in order to strengthen the legislative framework and facilitate implementation. For example, review the necessity to issue new regulations to make an SNI mandatory and to assign an enforcement body every time it is updated and standardize the content of such regulations across fortified foods. Revoke "additional regulations" on mandatory fortification to avoid duplication and contradictions in regulations outside of the 'SNI and supportive regulations' model. Consider the wheat flour legislative framework as an example of how other mandatory fortification foods can be legislated.

- **Regulatory Monitoring for Enforcement of Compliance for Food Fortification:** Commission a review of all components of regulatory monitoring for food fortification to document the various components since there are different implementors, and look for ways to streamline and simplify the process in line with recommendations from the 2017 WHO/Food and Agriculture Organization (FAO) Review of the Food Control System. In particular, assess options to increase collaboration and integration between BPOM and MoI to reduce the number of monitoring activities and duplication, make more effective use of resources and reduce the burden on industry. The fact that LSPro has been authorized by both BPOM and MoI potentially creates opportunities for greater integration. Consider also reducing the emphasis on market supervision and product testing and instead increase emphasis on pre-market facility and product supervision, in particular facility inspection and document audit.

- **Assessment of Coverage and Impact:** Create a working group or taskforce within the Food Fortification Forum that is responsible for seeking/keeping an eye out for opportunities to assess indicators relevant to fortification through planned data collection exercises such as surveillance systems and national surveys.

**For more info:**

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