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Mind the Gap
Country Case Study
INDONESIA

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About the Mind the Gap Report

Achieving Sustainable Development Goal 2 (Zero Hunger) by 2030 is increasingly at risk due to the combined impacts of climate change, conflict, COVID-19, and rising living costs, which have reversed progress in reducing global hunger. Social protection systems, while essential for supporting vulnerable populations, often fail to account for nutritional needs—a key element in breaking the cycle of poverty, vulnerability, and malnutrition. This oversight represents a missed opportunity to advance the objectives of SDG 2, especially in a context where hunger has been rising since 2015.

Amid these challenges, the Mind the Gap report explores the role of social protection systems in addressing affordability gaps of nutritious diets. It is structured around the **Fill the Nutrient Gap (FNG)** analytical approach, which aims to understand the drivers affecting the availability, cost, and affordability of nutritious diets in specific contexts. The policy objective is to identify and implement interventions to improve diets, especially of nutritionally vulnerable people, including through the integration of nutrition into social protection systems. Through case studies from 12 diverse national contexts, the report presents actionable social protection pathways for reducing the affordability gap of nutritious diets and improving food security and nutrition outcomes.

Further information and evidence on the FNG can be accessed at: wfp.org/fillthenutrientgap

FNG
FILL THE NUTRIENT GAP
SYSTEMS ANALYSIS FOR NUTRITION

Contents

I. Overview of the malnutrition burden and poverty situation

Indonesia has made tremendous progress in lifting people out of poverty in the last 20 years. The share of Indonesians living under the national poverty line has halved from 19 percent in 2000 to less than 10 percent in 2022 (1). In 2022, 2.5 percent of the population were living below the international poverty line (USD 2.15 a day) and 20 percent below the lower-middle income poverty line (USD 3.65 a day) (1) (2). However, the pace of poverty reduction has slowed in the last ten years, which may have been accentuated by the COVID-19 crisis in 2020–2021.

Indonesia experiences a triple burden of malnutrition – undernutrition, micronutrient deficiencies and overweight/obesity – in all regions of the country, which can have severe implications for human capital development, translating to economic losses measured as lost productive potential and increased health care costs (3). In 2015, the World Bank estimated losses due to stunting and malnutrition to be 2–3 percent of Indonesia's gross domestic product (GDP) (4). Stunting and wasting in children aged under 5 years are "high" according to the World Health Organization (WHO) classification, at 21.6 percent and 7.7 percent respectively in 2022 (5).

In regions such as Nusa Tenggara Timur, stunting rates are over 35.5 percent (5). Anaemia prevalence is high during critical periods of the life cycle: 39 percent of children under 5 and 49 percent of pregnant women were anaemic in 2018 (6). Micronutrient deficiencies during these periods can impair physical and cognitive development and increase the risk of other forms of malnutrition.

The proportion of adults who are overweight or obese has increased dramatically from 19 percent in 2007 to 35 percent in 2018 and Indonesia is off course to meet World Health Assembly targets (6). Overweight/obesity is found across all age and gender groups, with the highest prevalence among adult women at 44 percent in 2018 (7). This is concerning as overweight/obesity can lead to diet-related non-communicable diseases (NCDs) with implications for mortality risk, health care costs and productivity (8).

The average diet in Indonesia is not very diverse. In 2022, grains, mainly rice and wheat flour, contributed almost 57 percent of average dietary energy. The contribution of fruits, vegetables, and nuts and legumes to dietary energy, was very low at 5.8, 0.9 and 3.3 percent respectively (9). Beef is the main protein source for the highest income group and the consumption of fish is increasing due to the government's effort to promote fish as part of healthy diets (10).

From 2000 to 2015, while Indonesia's population and per capita GDP grew on average by 1.3 percent and more than 2 percent per year respectively, demand for poultry and pork grew annually by 5.8 percent and 4.5 percent respectively (11). While the consumption of traditional staple foods is declining, intake of processed foods high in fat, sugar and/or salt is increasing in both rural and urban settings (12).

II. Country priorities on nutrition and social protection

NUTRITION POLICY FRAMEWORK

To counter the triple burden of malnutrition, the Indonesian National Action Plan for Food and Nutrition (2011–2015) aimed to increase nutrition surveillance, improve access to nutrition services and fortified food, promote better nutrition practices, change sociocultural norms around nutrition, refine nutrition regulations and standards, and support multisectoral collaboration in the implementation of nutrition sensitive and nutrition specific interventions (13). In 2018, the government published a new national strategy on "stunting reduction acceleration", identifying stunting as a national priority in the National Medium-Term Development Plan (2020–2024) (14).

SOCIAL PROTECTION POLICIES AND PROGRAMMES

Since 2000, Indonesia has made great efforts to establish a social protection system that comprehensively and adequately caters to the needs of its population. Spending on social protection has steadily increased, yet still represents a relatively low proportion of public expenditure for a country of its income level (15). According to World Bank estimates, Indonesia spent 1.4 percent of its GDP on social protection measures in 2016, with 44 percent of this spent on social assistance (15). There are three main social assistance programmes:

1. **Program Keluarga Harapan (PKH)** is the largest conditional cash transfer programme in Indonesia, reaching 10 million households in 2018 (15). PKH targets poor and vulnerable families using the Integrated Data of Social Welfare (DTKS). Households must comply with certain health and education conditions to receive the cash transfer, including monthly meetings to promote social and behavioural changes. The transfer amount, based on household composition, is estimated to be equivalent to 20 percent of the average income of the poorest households (16).
2. **SEMBAKO** is a food assistance programme targeted at households in the two lowest wealth quintiles. Beneficiary lists are derived from the DTKS and verified and validated by regional governments. At the time of the Indonesia Fill the Nutrient Gap (FNG) analysis, beneficiaries received an electronic card or voucher which could be redeemed at dedicated disbursement outlets (called e-warongs) for certain pre-approved foods (12). Since then, however, recipient families are no longer required to purchase food items exclusively through e-warongs. During the COVID-19 pandemic, the government expanded SEMBAKO horizontally by increasing the number of eligible households from over 15 million to a total of 20 million, and vertically by increasing the transfer size from 150,000 Indonesian rupiah (IDR) to IDR 200,000 (USD 10.50 to USD 14.10) per household per month (17).
3. **Bantuan Sosial Tunai (BST)**[1] was an unconditional cash transfer programme targeting vulnerable households not covered by other social assistance programmes in areas worst affected by COVID-19. The programme covered 10 million households and formed part of the government's efforts to reactivate the economy by strengthening people's purchasing power (18). Beneficiaries received IDR 300,000 (USD 21.00) per household per month for a total of four months, regardless of the size and demographic composition of the household.

1 As of 2022, the BST programme is no longer in operation, leaving PKH and SEMBAKO as the two primary national social assistance programmes.

The government has made efforts to make social assistance programmes more nutrition sensitive. Conditions for the PKH, as well as the complementary benefits, contribute to the underlying determinants of nutrition, including improved access and use of health and education services. While food assistance originally consisted only of subsidized rice, the transformation to the SEMBAKO programme expanded to allow people to purchase a variety of foods to increase their dietary diversity. In addition, partners (including WFP) are exploring opportunities to integrate rice fortification into national social assistance schemes.

III. WFP's approach

In line with the 2030 agenda, the Government of Indonesia placed inclusive, transformative and sustainable development at the centre of its national planning framework (RPJMN 2020–2024), with the aim of reducing high levels of stunting among children under 5 and reducing regional inequalities. To help generate evidence on the cost and affordability of nutritious diets and identify entry points for nutrition sensitive programmes, WFP undertook the FNG analysis in close collaboration with the Ministry of National Development Planning (BAPPENAS) and the Ministry of Health. A wide range of national experts and stakeholders provided input throughout the process. The objective of the analysis was to identify dietary inadequacies, address barriers to adequate nutrient intake, and build consensus on priority interventions and policy options to improve the nutrition of population groups across the life cycle through various programmes and across sectors such as health, social assistance, education and food systems. The Indonesia FNG analysis took place from September 2020 to November 2021 (12).

Cost of the diet analysis conducted for FNG Indonesia

The cost of the diet analysis was conducted using data from the National Socio-Economic Survey (SUSENAS) from 2019 (12). The analysis was undertaken for each of the 33 provinces at rural and urban levels, and for DKI Jakarta (urban only). The lowest costs of a diet that meets energy requirements (energy-only diet) and a diet that meets requirements for macro and micronutrients (nutritious diet) were estimated using the FNG methodology (22) for a modelled household consisting of five individuals: a breastfed child (12–23 months), a school-age child (6–7 years), an adolescent girl (14–15 years), a breastfeeding woman and an adult man.

The cost of diets was then compared with household food expenditure to determine the proportion of households unable to afford the costs (called "non-affordability"), using SUSENAS 2019 data. The gap between the lowest cost nutritious diet and the food expenditure of a household is referred to as the affordability gap.

Intervention modelling was conducted for a subset of ten provinces (urban and rural) and DKI Jakarta. Modelling regions were chosen in consultation with national stakeholders considering their interest and to represent the geographic and food system diversity of the country.

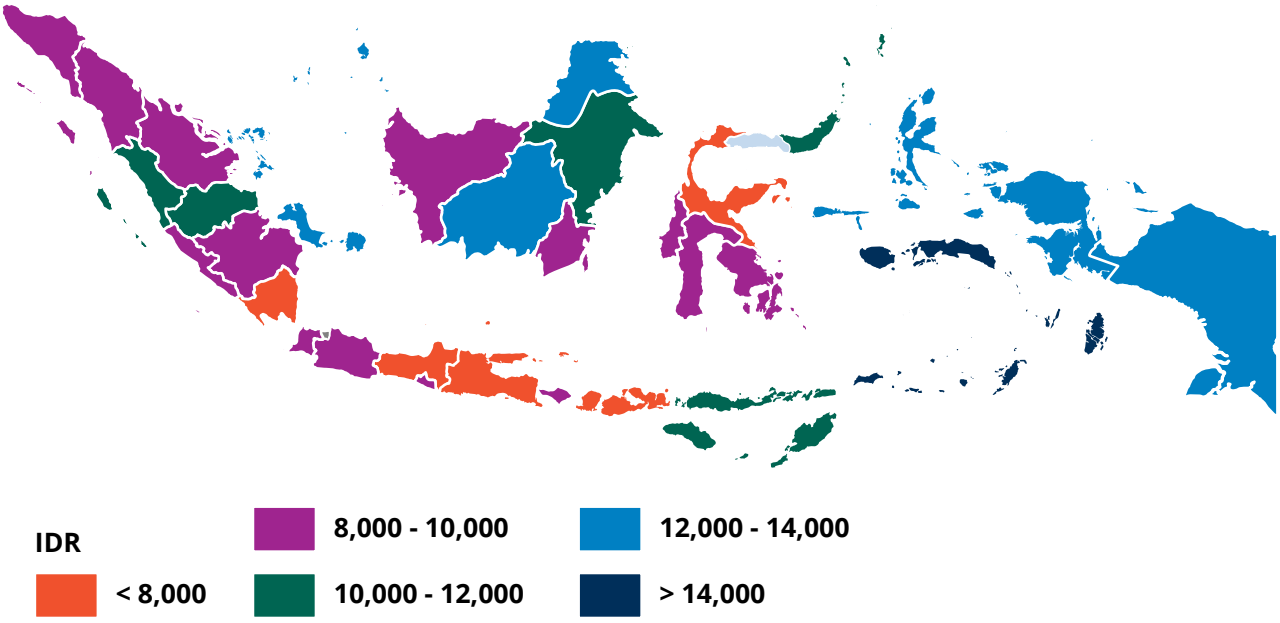
IV. Findings of the FNG

COST AND AFFORDABILITY OF THE NUTRITIOUS DIET

The cost of a nutritious diet was on average IDR 42,569 (USD 3.00) per day for a five-person household, or IDR 8,532 (USD 0.60) per capita per day. This was 2.5 times more expensive than an energy-only diet (that meets only energy needs) at IDR 3,392 (USD 0.24) per capita on average. The cost of a nutritious diet varied widely across regions, from IDR 6,566 (USD 0.46) to IDR 14,182 (USD 1.00) per capita (see Figure 1). It was higher in eastern provinces (Maluku, Maluku Utara, Papua Barat, Papua) which are more remote and where food commodities tend to be generally more expensive. In provinces such as Sulawesi Utara and Sumatera Barat, meeting energy needs was found to be relatively cheap while nutritious foods were harder and more costly to access.

Figure 1: Average daily cost (IDR) per capita of the nutritious diet by province (FNG 2021, using data from 2019)

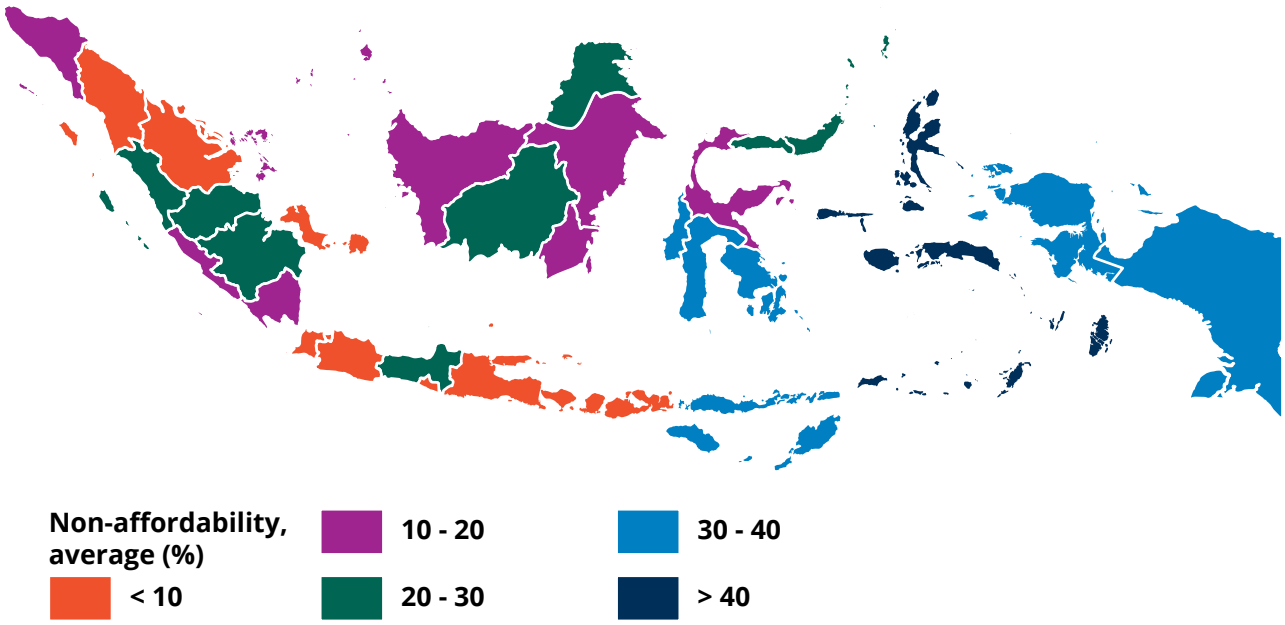
a)



In all provinces but Papua, the FNG analysis found all households able to afford their energy needs. However, non-affordability of the nutritious diet varied widely across provinces (see Figure 2), ranging from 4 percent in Banten to 53 percent in Maluku and Maluku Utara. On average, non-affordability was higher in rural areas (16 percent) compared with urban areas (9 percent).

Figure 2: Average non-affordability (percentage) of the nutritious diet by province (FNG 2021, using data from 2019)

b)

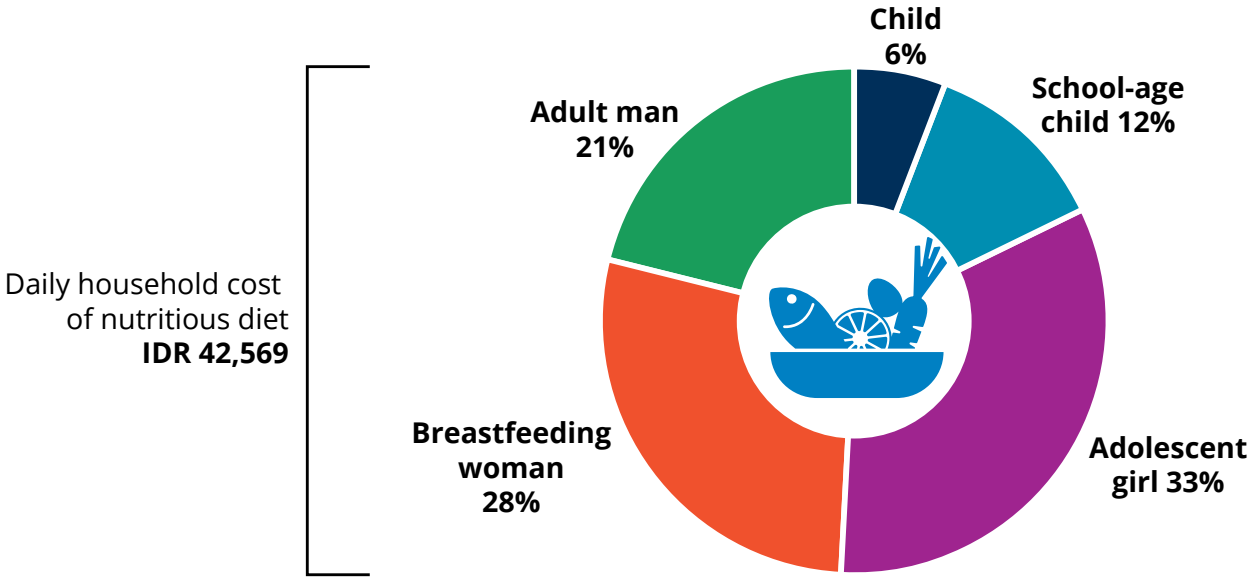


VULNERABLE GROUPS

Adolescent girls and pregnant and breastfeeding women have relatively higher requirements for specific nutrients such as iron, folic acid and vitamin B12. In the modelled household, this is reflected by the adolescent girl and breastfeeding woman together having the highest cost of nutritious diets, representing over 60 percent of the household's cost of a nutritious diet (see Figure 3). Actual intra-household food allocation may not consider these differential nutrient needs and the corresponding greater need for diversity in the diet, which comes at a higher cost, and therefore targeted interventions such as supplementation are often needed to help cover the nutrient requirements of nutritionally vulnerable individuals. This is reflected in the Riskedas (2018) finding that 27 percent of girls and women were anaemic (6). The same survey found that nearly half of all pregnant women, and 85 percent of pregnant women between 15 and 24 years old, were anaemic, which is concerning as maternal anaemia is associated with low birthweights and decreased iron stores for the baby, leading to impaired development (19).

The nutritious diet has a lower cost for the child aged 12–23 months compared with other household members, as the child consumes less food and the modelled diet assumes optimal breastfeeding which covers a large proportion of their nutrient needs. This age group, however, is nutritionally vulnerable as their smaller stomachs mean that meals must be provided at higher frequency and need to include nutrient dense foods to cover nutrient requirements (20).

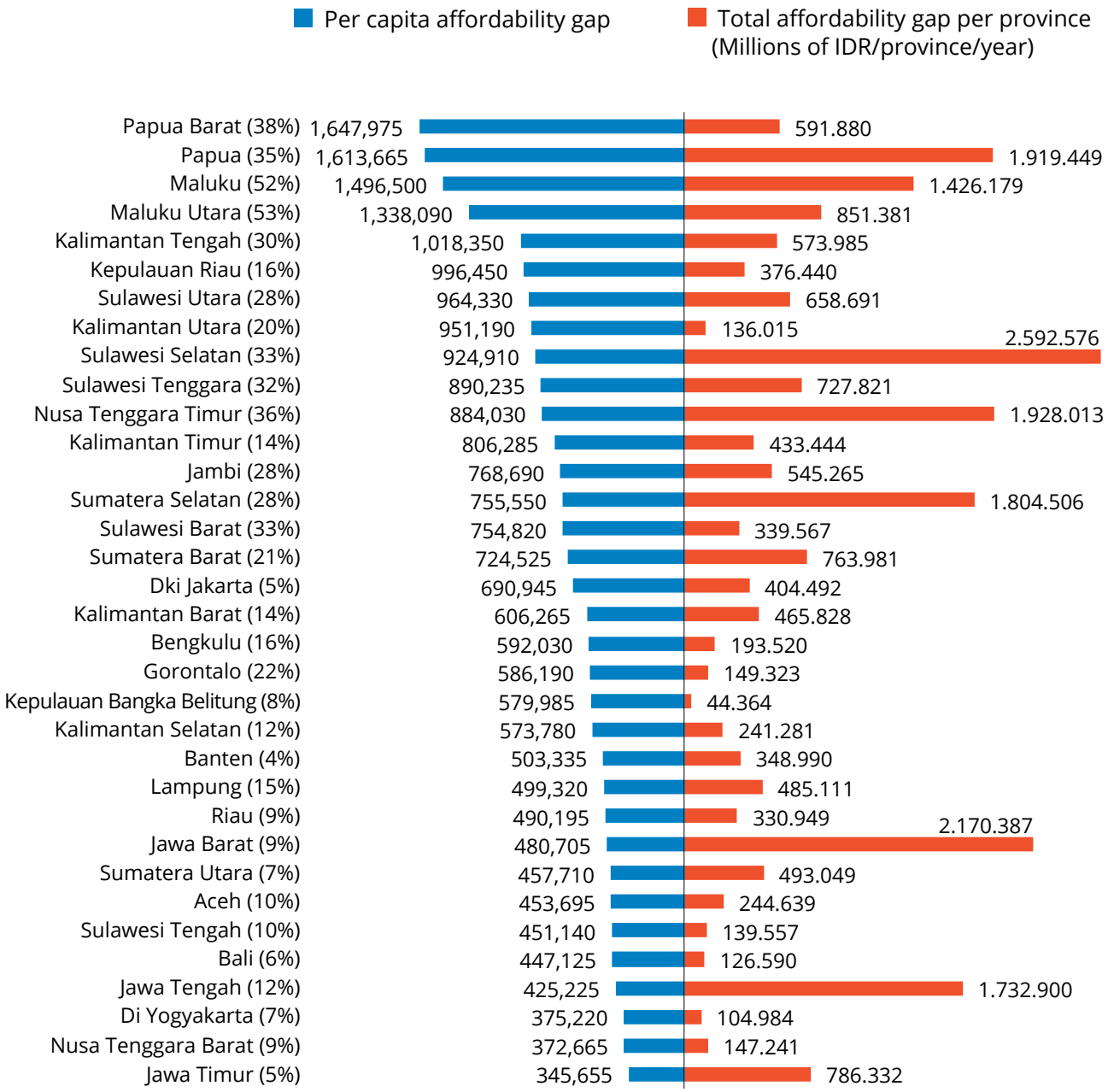
Figure 3: Distribution of the daily cost of a nutritious diet for the modelled household across individual household members (FNG 2021)



AFFORDABILITY GAP

The cumulative affordability gap for an area sums up individual affordability gaps and represents the monetary amount needed to enable all households to reach the lowest cost nutritious diet. Nationally, Indonesia's cumulative affordability gap was estimated to be IDR 24.3 trillion (USD 1.7 billion) per year. The average per capita affordability gap for a nutritious diet was roughly IDR 706,450 (USD 49.60) per year. The eastern provinces, which have the highest average cost and non-affordability of the nutritious diet, had the largest per capita affordability gap. The larger the affordability gap, the poorer the quality of the diet is likely to be, which puts individuals within the household at greater risk of malnutrition. On average, an individual in these provinces who is unable to afford the nutritious diet was also furthest away from meeting that threshold, suggesting that individual needs for closing the gap are higher than in other provinces (see Figure 4).

Figure 4: Total and average per capita affordability gap by province (FNG 2021, using data from 2019)



The cumulative affordability gap can be compared with other public expenditure, such as subsidies or agricultural support programmes, to inform reallocation of resources to programmes or policy instruments more impactful in improving food security and nutrition. In Indonesia, the Organisation for Economic Co-operation and Development (OECD) found that the largest share of agricultural support is market price support to producers, resulting in a distortion of food prices, making them higher for consumers (15). The estimated value of this support was IDR 308 trillion (USD 22 billion) in 2019, approximately 13 times more than the estimated affordability gap.

V. Using the FNG to inform social protection programmes

CONTRIBUTION OF SOCIAL PROTECTION TO REDUCING THE AFFORDABILITY GAP

As discussed in Section II, the Government of Indonesia adopted a series of social assistance measures in the last decade to reduce and prevent poverty in vulnerable households. However, for social assistance to better support the country in achieving its long-term development objectives, programmes must become nutrition sensitive to improve human capital development. The FNG analysis modelled the contribution of the different social assistance programmes on economic access to nutritious diets. This case study discusses findings on the modelling of the SEMBAKO voucher-based food assistance programme.

Under SEMBAKO, households received a monthly transfer that could be spent according to their needs at e-warongs (12). Previous versions of the programme only included rice, but it was later redesigned to promote nutritious food choices, permitting beneficiaries to buy a combination of staple foods, animal source foods, legumes or another vegetable source of protein, fruits and vegetables. However, programme monitoring showed that some e-warongs formed bundles with pre-selected foods to reduce costs, avoid spoilage and prevent queuing. These bundles were composed mostly of rice, reducing nutritional value. All e-warongs included eggs, but less than half were found to include chicken, tofu, tempeh or vegetables (12).

The FNG modelled three different bundles representing increasing levels of dietary diversity that could be purchased by a household using a SEMBAKO voucher. The modelling used local market prices but, given that food prices at e-warongs tended to be higher, the purchase value was assumed to be 95 percent of the transfer (IDR 190,000 or USD 13.36 per month). The three scenarios were:

1. **basic:** approximately 10 kg of rice, with the remainder used for eggs;
2. **diverse:** approximately 10 kg of rice, with the remainder used for eggs, tofu, chicken, banana and cassava leaves; or
3. **diverse, fortified:** a diverse bundle, as above, with fortified rice.

Modelling regions were selected to represent the geographic, demographic and food system diversity of the country and included priority provinces for nutrition programming. These regions were classified into different typologies: regions with high cost and high non-affordability of nutritious diets (Type 1); regions with medium cost and medium-to-low non-affordability (Type 2); and regions with low cost and low non-affordability (Type 3).

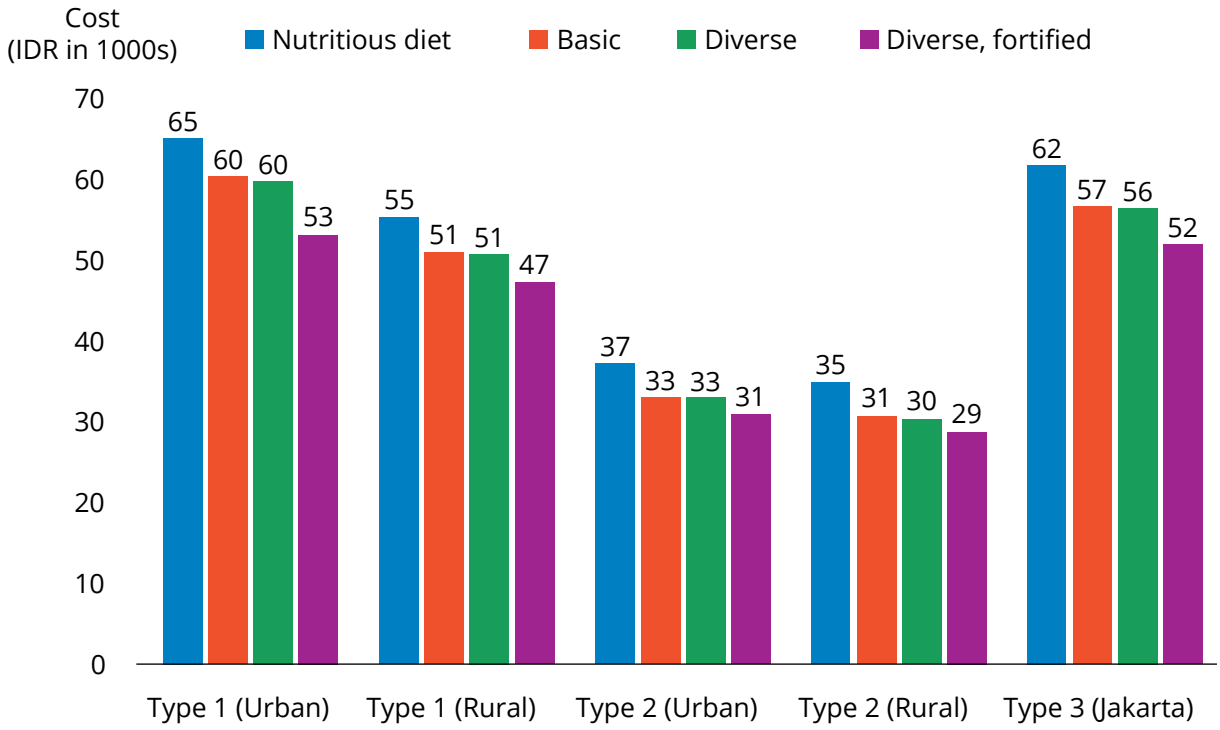
Figure 5 shows the change in the cost of the nutritious diet for households in the different area typologies for each of the SEMBAKO modelling scenarios. Even with a basic package of foods, the modelled cost of the nutritious diet for the

household reduced by between 7 and 12 percent, depending on the area. The diverse package reduced the nutritious diet cost only slightly more because the pre-set quantity of rice still left a relatively small amount available for other foods. The cash value of the SEMBAKO transfer was equal to 9–19 percent of the cost of the nutritious diet.[2]

Large-scale rice fortification can help households and vulnerable individuals access more and a wider range of micronutrients. Wheat flour fortification is mandatory in Indonesia and there are plans to introduce fortified rice. The government has recognized its potential in combating malnutrition and has thus incorporated fortification as an objective in the Medium-Term National Development Plan (RPJMN) 2020–2024 (21).

Replacement of standard rice in the diverse package with fortified rice would result in a greater reduction in the cost of the nutritious diet, ranging from 15 to 18 percent, depending on the area. In Type 1 urban modelling regions (urban areas which have the highest costs and highest non-affordability of nutritious diets), the reduction would be the largest: a diverse package with unfortified rice would reduce the nutritious diet cost by 8 percent, but with fortified rice the nutritious diet cost would reduce by 18 percent.

Figure 5: Daily cost of the nutritious diet for the household under different scenarios of use of SEMBAKO transfer (FNG 2021, using data from 2019)



2 The range reflects the differences in the cost of the nutritious diet across regions rather than the value of the SEMBAKO voucher.

VI. Bridging research with policy and action

The FNG revealed the connections between health, food and social protection systems and demonstrated how each influences access to healthy and nutritious diets. The findings showed how important it is to strengthen the linkages between social assistance and food systems to improve the effects of programmes on food security and nutrition and to ensure programmes reach the most vulnerable populations. In a workshop held with stakeholders from the social protection sector, the FNG results were used to identify the main priorities to make programmes such as SEMBAKO more nutrition sensitive. These included:

- Reviewing SEMBAKO transfer size by province to ensure it is adjusted to accommodate variations in the prices of nutritious foods and allows recipients to purchase fresh, diverse and nutritious foods, including fortified foods.
- Ensuring the adequate availability of nutritious and diverse foods in retail shops by providing support to strengthen supply chains of nutritious foods up to the point of retail.
- Supporting the introduction of fortified rice at the same cost as unfortified rice for recipients of social assistance programmes. The use of social assistance programmes not only addresses unmet nutritional needs among recipients of the transfer, who are often among the poorest households, but also provides guaranteed demand and specific distribution channels which support the development of the fortified rice supply chain.
- Enhancing the contribution of social assistance programmes to nutrition by including nutritious foods in the transfer. In areas with higher affordability gaps, nutrition specific interventions targeted at individuals with higher nutrition needs should be considered. This includes, for example, fortified complementary foods or micronutrient powder (locally called Taburia) to fortify home-prepared foods for children aged 6–23 months. These interventions may be delivered through the health system to those eligible for social assistance.
- Strengthening the implementation of nutrition programmes to help households use the allowances provided to purchase more nutritious foods and to foster healthy eating and habits.

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