

# Healthy and sustainable food systems in Indonesia

MAY 2026

PREPARED BY:

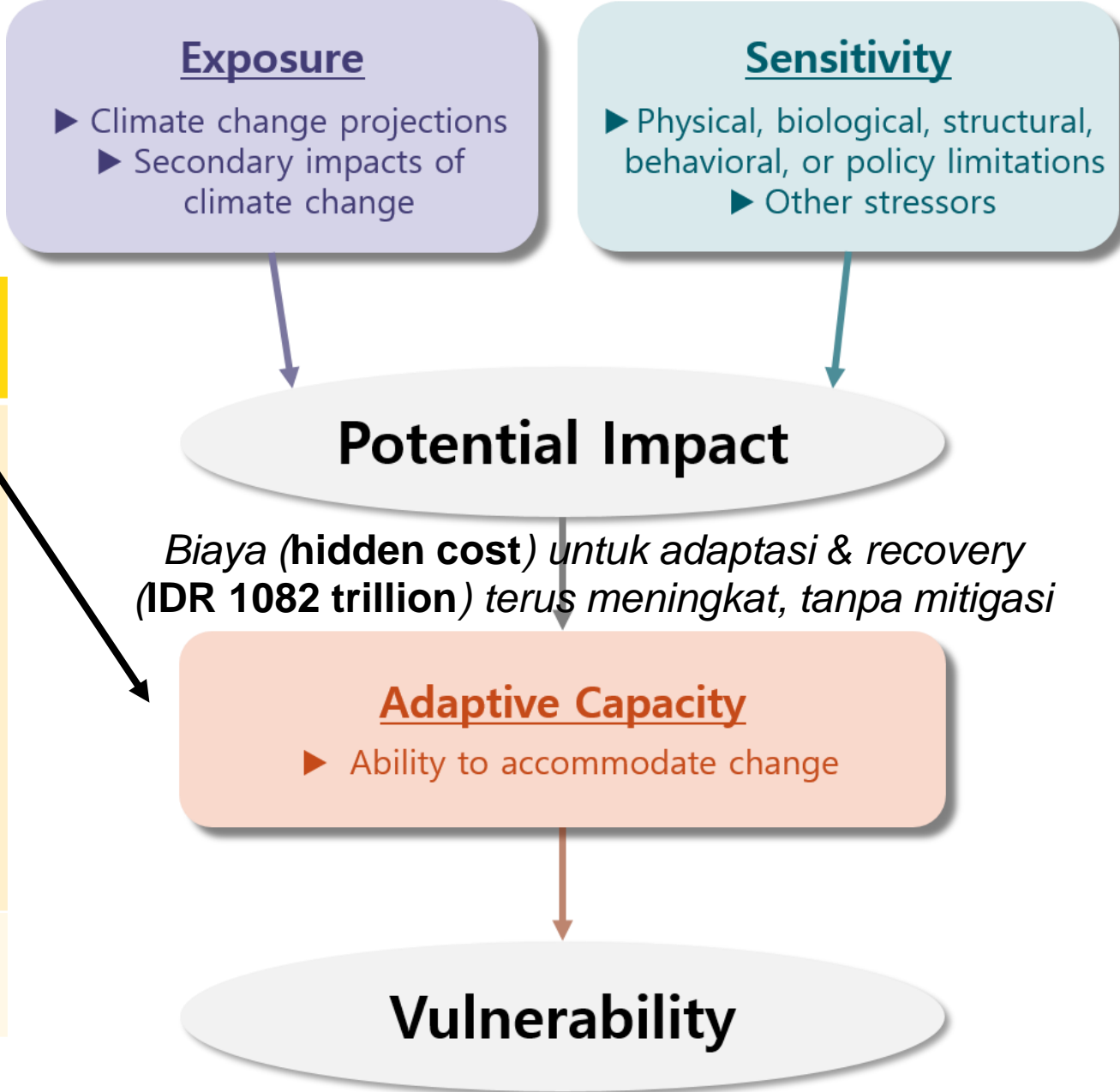
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GLOBAL ALLIANCE FOR IMPROVED NUTRITION



# Our food systems, environment, and climate

Impacts	Mitigation commitments
GHG emissions ~26% - Agriculture 13% - Food loss and waste 7% - Land use-related 6% - Energy use in (ultra processed) food industries supply chain	Emission reduction 0.3–0.4% by 2030
Deforestation; 86k ha/year	Corporate commitments



Shift to healthy, sustainable, and just food systems: Potential net economic returns of IDR 8.7 trillion/year

Sources: CIT 2025, Second NDC 2025

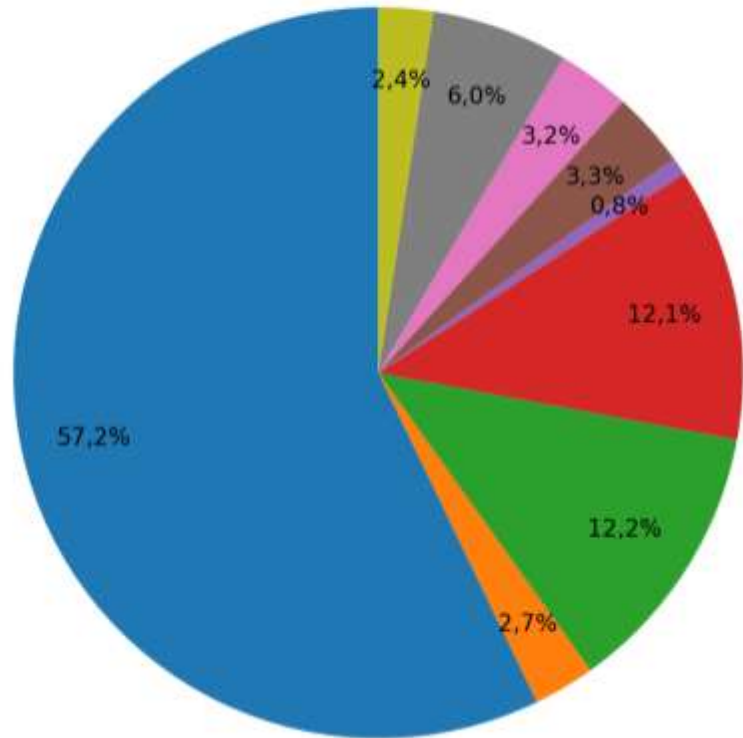
# Program pangan & kebutuhan gizi

Over konsumsi; padi-padian, pangan hewani, minyak & lemak.

Perlu ditingkatkan: umbi-umbian, buah, kacang-kacangan

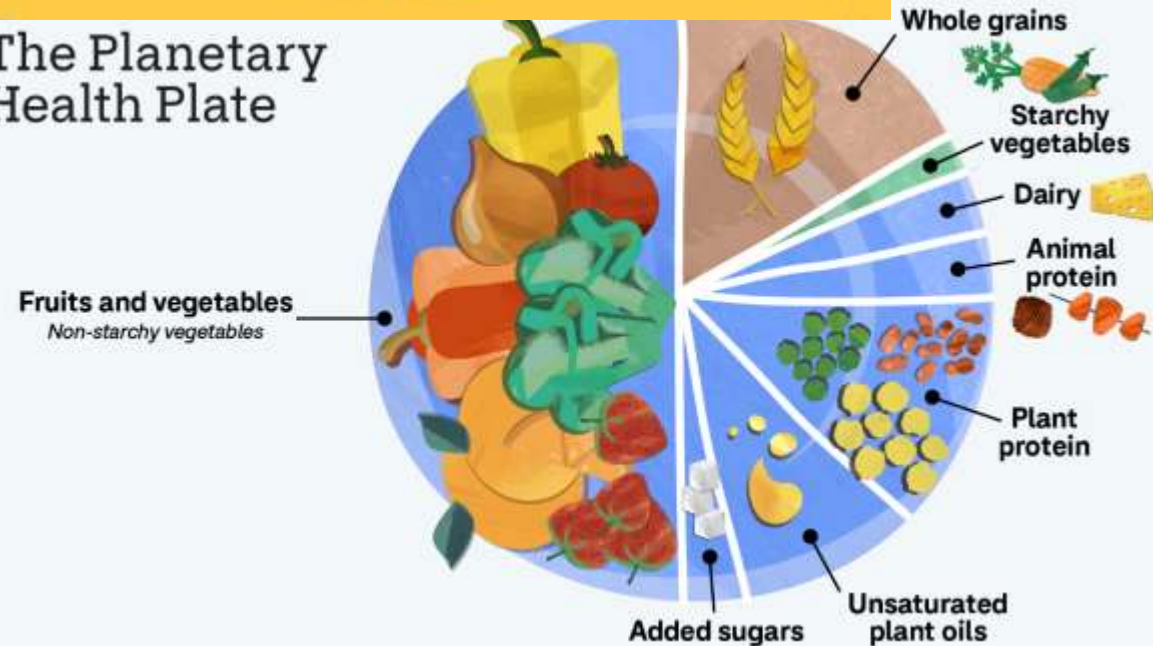


Distribusi PPH 2024

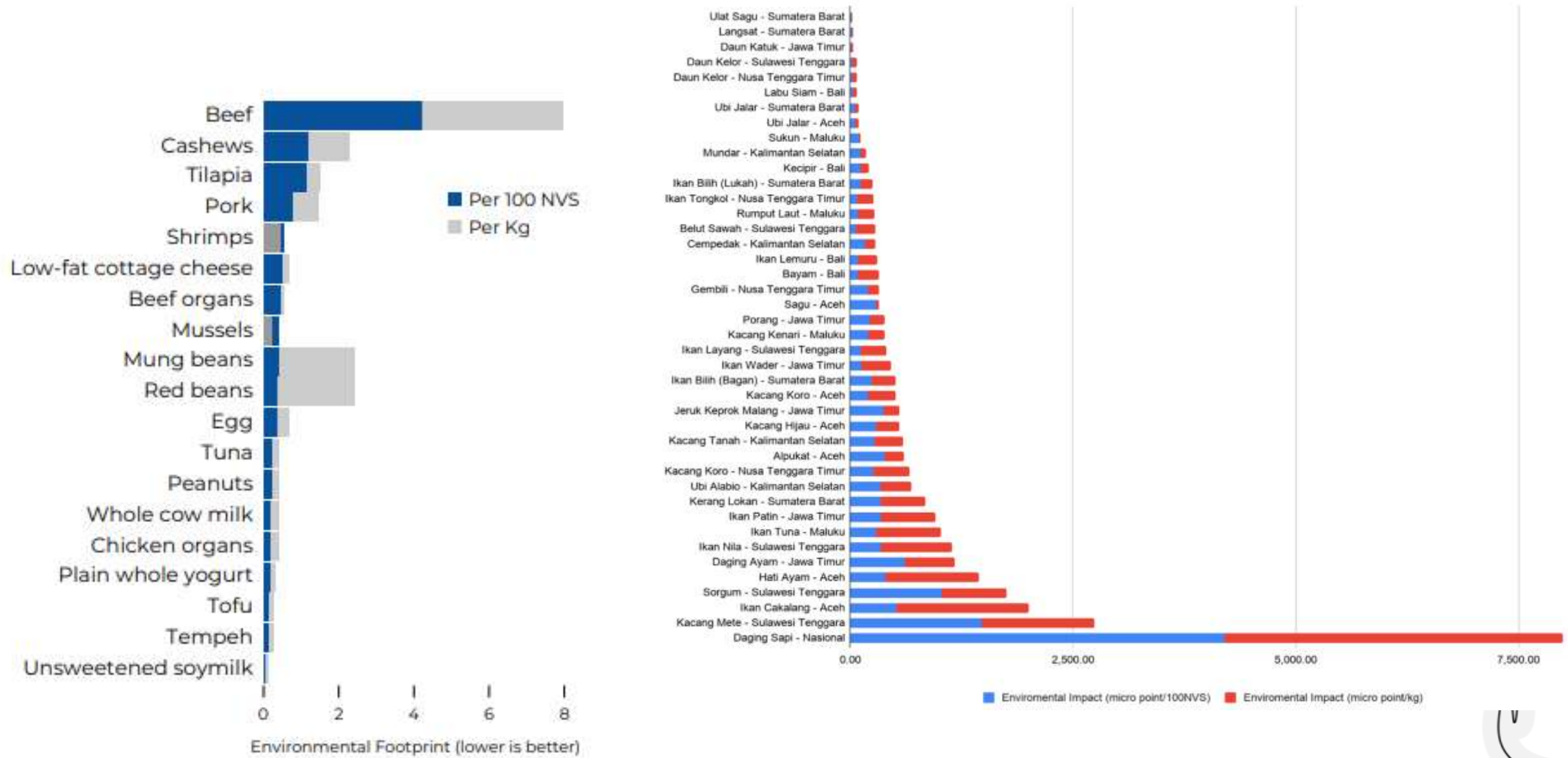


- Padi-padian
- Minyak & lemak
- Gula
- Umami-umbian
- Buah/biji berminyak
- Sayur & buah
- Pangan hewani
- Kacang-kacangan
- Lain-lain (minuman & bumbu)

## The Planetary Health Plate



# RECOMMENDATION: NUTRITIOUS & LOW ENVIRONMENTAL IMPACTS FOODS



Comparison of overall Environmental Footprint Scores per unit mass (i.e., 1 kg of food) vs. per unit nutritional value

# PANGAN LOKAL PADAT GIZI, RAMAH LINGKUNGAN, & BERKETAHANAN IKLIM DI RAN & RAD PG BPSDL

Pemetaan pangan unggulan juga dilakukan per provinsi dengan pendekatan yang sama. Beberapa provinsi memiliki lebih dari tiga pangan unggulan karena perbedaan skor yang tidak signifikan.



# Optifood: Recommendations based on nutritional needs in 37 districts



Papeda



Talas keladi



Daun dalung



Table 11 Nutrient-dense food sub-groups and food items in the local specific FBR for School-Aged Children in 6 Regions of Indonesia

Food Group	Food Sub-Group	Nutrient-Dense Food Sub-Groups and Food Items					
		Sumatera Region	Java Region	Kalimantan Region	Nusa Tenggara Region	Sulawesi Region	Maluku-Papua Region
Grains & grain products	Refined grain	Rice, bread	Rice, bread	Rice	Rice	Rice	Rice, bread
	Whole grain			Corn, cereal	Corn	Corn, cereal	Corn, cereal
Starchy roots & other starchy plant foods	Vitamin C-rich starchy plant foods	Cassava		Cassava	Sweet potato	Cassava	
	Other starchy plant foods	Yam	Yam				Taro ( <i>kelodi</i> )
Meat, fish & eggs	Egg	Chicken egg	Chicken egg	Chicken egg	Chicken egg	Chicken egg	Chicken egg
	Fish without bones	Tuna, mackerel, tongkol, rengis, eel, catfish	Tuna, catfish, eel	Mackerel	Tuna, mackerel	Tuna, mackerel	Tuna, mackerel, shark, catfish

	Fish with bones	Anchovy/Rinuak	Anchovy	Anchovy	Anchovy	Anchovy, milkfish	
	Organ meat	Chicken liver	Chicken liver		Beef offal	Chicken liver	Chicken liver
	Poultry	Chicken meat	Chicken meat		Chicken meat	Chicken meat	Chicken meat
	Red meat	Beef	Beef	Beef	Beef, pork	Beef	Beef
	Seafood		Shrimp, squid		Crab, shrimp		
Dairy products	Milk	Milk	Milk	Milk	Milk	Milk	Milk
Legumes, nuts & seeds	Soybeans	Tempeh, tofu	Tempeh, tofu, tauco	Tempeh, tofu, soymilk	Tempeh, tofu, mung beans	Tempeh, tofu	Tofu
Fruits	Vitamin A rich fruit	Papaya	Papaya	Ambarello	Papaya, mango	Papaya, mango	Papaya
	Vitamin C rich fruit	Orange, Durian	Dragon fruit, guava, orange,	Durian	Orange, rose apple, guava, durian	Dragon fruit, guava	Guava, pineapple, melon, matoa fruit,
			rose apple, durian				rose apple, dragon fruit
	Other fruits	Banana	Banana		Banana	Banana, coconut	Banana
Vegetables	Dark green leafy vegetables (DGLV)	Spinach, phokcoy	Spinach, mustard greens	Spinach, fern leaves, cassave leaves	Spinach, water spinach, moringa leaves, mustard greens, cassave	Cassava leaves, fern leaves	Spinach, moringa leaves, red spinach, water spinach, mimosa pudica

Fahmida U, Pramesti IL, Kusuma S, Sudibya ARP, Rahmawati R, et al. (2025) Correction: Problem nutrients in diet of under-five children and district food security status: Linear programming analyses of 37 stunting priority districts in Indonesia. PLOS ONE 20(10): e0334462. <https://doi.org/10.1371/journal.pone.0334462>

# FOOD LOSS AND WASTE (FLW) IN INDONESIA: **23-48 M. TON /YEAR**

115-184 kg/kapita/tahun

**RPJMN: MENGURANGI FOOD LOSS & WASTE 5%/TAHUN**

3-

## Potensi Timbulan Sampah/Sisa Makanan dari Program Makan Bergizi Gratis di Sekolah



- *Food Rescue x School Meal Program*
- *Rescue kitchen & education on FLW*



## Data Nasional: Estimasi Timbulan Total dari Penerima Manfaat

### Seluruh Penerima Manfaat

Jenis Penerima Manfaat	Timbulan sisa pangan (ton/tahun)				
	2025	2026	2027	2028	2029
Sekolah	140,180	479,583	796,023	1,112,218	1,427,503
Lainnya*	971	3,340	5,514	7,704	9,888
<b>Total</b>	<b>141,151</b>	<b>482,923</b>	<b>801,537</b>	<b>1,119,922</b>	<b>1,437,391</b>

- Total timbulan sisa pangan dari seluruh penerima manfaat MBG yaitu **141,151 ton/tahun pada 2025** dan meningkat hingga **1,437,391 ton/tahun pada 2029**.
- Hasil estimasi timbulan sisa pangan dari jenis penerima manfaat Lainnya berdasarkan proporsi menunjukkan **balita memiliki timbulan tertinggi**, sementara **PKBM memiliki timbulan terendah**.

## Increasing cold chain technologies in fish supply chain



Detail Penerima Manfaat Jenis Lainnya\*\*

# Pathways to healthier and sustainable food systems

- **Policy coherence;** nutrition, environment and climate outcomes in PSN
  - Nutritious and low environmental impacts **local foods** in MBG
  - Reducing food loss and waste in food estates and *MBG (redesign)*
  - Climate-smart agriculture and local food (**tubers, legumes**) in food estates
- **Strengthening supply chain of local foods**  
**Agribusinesses, private sector, CSOs** investments must involve

No	Province	District	Number of Variety of Foods (N)				
			Total per District	6–11 mo	12–23 mo	24–35 mo	36–59 mo
1	Aceh	Aceh Timur	110	37	53	69	75
2	Sumatera Utara	Simalungun	127	29	84	78	93
3	Sumatera Barat	Solok	146	35	97	100	126
4	Jambi	Kerinci	85	30	46	55	63
5	Riau	Kampar	137	39	89	81	108
6	Sumatera Selatan	Muara Enim	106	31	67	39	93
7	Bengkulu	Bengkulu Utara	118	44	85	68	96
8	Lampung	Tanggamus	140	45	84	86	112
9	Kepulauan Bangka Belitung	Bangka	129	47	73	71	103
10	Kepulauan Riau	Lingga	118	37	77	92	86
11	Kalimantan Barat	Sintang	121	32	74	83	84
12	Kalimantan Tengah	Kapuas	76	28	44	44	57
13	Kalimantan Selatan	Tanah Bumbu	117	21	58	77	97
14	Kalimantan Timur	Kutai Barat	94	22	62	50	80
15	Kalimantan Utara	Nunukan	79	16	39	39	57
16	Banten	Lebak	146	47	100	93	110
17	Jawa Barat	Majalengka	149	49	92	112	121
18	Jawa Tengah	Pekalongan	126	47	92	99	94
19	DIY	Bantul	171	38	115	111	130
20	Jawa Timur	Kediri	137	44	71	96	101
21		Jember	112	34	68	78	76
22		Bondowoso	111	41	81	68	73
23		Nganjuk	125	40	60	79	91
24		Sampang	127	40	83	94	96
25	Bali	Buleleng	151	41	93	88	112
26	NTB	Bima	127	33	79	88	108
27	NTT	Manggarai Barat	87	21	61	63	73
28	Sulawesi Utara	Bolaang Mongondow	90	30	51	60	62
29	Sulawesi Tengah	Parigi Moutong	102	27	68	68	78
30	Sulawesi Selatan	Bone	135	32	79	95	101
31	Sulawesi Tenggara	Kolaka	110	40	69	70	84
32	Gorontalo	Pohuwato	78	25	57	54	57
33	Sulawesi Barat	Mamasa	119	35	69	79	98
34	Maluku	Kepulauan Aru	95	34	61	54	68
35	Maluku Utara	Kepulauan Sula	83	23	46	53	59
36	Papua Barat	Manokwari	115	45	75	80	91
37	Papua	Mamberamo Tengah	36	19	21	26	33

# Thank you

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