United Nations World Food Programme

Executive Brief: Indonesia Food Security Assessment and Classification

Indonesia has made significant strides in reducing poverty since the 1997-98 economic crisis and political transformation, and the El Nino drought which led to medium-term food insecurity and longer-term deterioration in nutritional status. However, over 50% of the population still lives on less than US$2 per day and an estimated 37 million people live below the poverty line[1]. The number of the 'near poor' in Indonesia is estimated to be 115 million[2].

Since the reopening of the WFP office in 1998, activities have focused on nutritional assistance to vulnerable children and women, school feeding, assistance to TB patients and livelihood improvements. In 2004, WFP also initiated several emergency responses, in particular to the 2004 tsunami, providing recovery rations to the survivors. The country is prone to natural disasters and in the last couple of years, floods, landslides, earthquakes and volcanic eruptions have affected hundreds of thousands of people.

As part of WFP's preparations for the next Protracted Relief and Recovery Operation (PRRO) starting in January 2008, a food security assessment took place from 6 to 22 December using secondary data available from various sources. WFP used this opportunity to pilot the Integrated Food Security and Humanitarian Phase Classification (IPC)[3] The assessment team worked closely with a task force consisting of representatives from the Ministries of Health and of Agriculture, FAO, ACF, SMERU Research Institute, and SEAMEO TROPMED Regional Centre for Community Nutrition.

1. Food security: How is Indonesia classified?
According to this exercise, the majority of the country is classified either "generally food secure" or "chronically food insecure" (see map on p.4).

Acute food and livelihood crisis: The western coast of Aceh, Simeulue and Nias islands that were affected by the tsunami and subsequent earthquake (December 2004 and March 2005) and parts of Yogykarta and central Java provinces that were affected the May 2006 earthquake, though the situation in these areas is improving.

Chronically food insecure: South Sumatra, East Java, West, East and part of Central Kalimantan, the South Eastern Islands, West, Central and South East Sulawesi, Papoua, Maluku. Generally, eastern Indonesia is an area of concern.

Generally food secure: West and Central Java, Central Sumatra, East of Lampung, Banhka Belitung, South and East Kalimantan, North and South Sulawesi.

To establish the classification, five key indicators were used:
o Under 5 mortality rate
o Stunting
o Water / sanitation
o Livelihood assets (female literacy, access to health, road access)
o Hazards
In addition, the following process indicators were used to give a more comprehensive picture: poverty, infant mortality rate, underweight and micronutrient deficiencies.

The IPC: classifying food insecurity

The Integrated Food Security and Humanitarian Phase Classification (IPC) approach was developed by the Somalia Food Security Analysis Unit (FSAU), for classifying current and expected food security into five phases:
- generally food secure
- chronically food secure
- acute food and livelihood crisis
- humanitarian emergency
- famine/humanitarian crisis

The IPC is not a methodology. It integrates information and analysis from diverse sources to classify food security according to internationally recognized reference indicators (e.g. on nutrition, livelihoods, coping strategies).

WFP is working with FAO and other partners to adapt the IPC in other countries and contexts. The goal is to develop and advocate for a commonly accepted, standardized tool for classifying food insecurity to facilitate comparison between countries and over time. The Indonesia pilot is the first time the IPC has been applied outside the Horn of Africa.

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[1] According to the national definition. Indonesia uses its own National Poverty Line based on the per capita Rupiah value of an individual's need to fulfill minimum requirements for food (2100 kcal/day). This was equivalent to 152.847Rp/capita/month in 2006.

[2] According to the national definition of BPS (national statistics office).

[3] The exercise took place under the umbrella of the WFP Strengthening Emergency Needs Assessment capacity project (SENAC)

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2. Early warning levels, based on hazard perception (December 2006 – June 2007)

Alert: Papoua Lowland is in an early warning state because of the high prevalence of HIV that affects the general population; continuation of this trend could lead to a livelihood crisis.

Moderate risk: East and Central Java are at medium risk, primarily owing to a combination of decreasing rainfall and increasing in rice prices, thereby pulling more and more people below the poverty line. The provinces of Riau, Jambi, South Sumatra, Benkulu, eastern Aceh and northern Lampung have a moderate risk of falling into the next classification phase due to the probability of floods, landslides and rice price instability.

High risk of falling into the "acute food and livelihood crisis"phase: the provinces of Nusa Tenggara Barat and Nusa Tenggara Timur and southern part of Maluku have the highest risk of falling into the next worse classification from their present chronically food insecure phase. A persistent delay in the monsoon and ensuing drought conditions are affecting small and marginal farmers, and landless labourers.

3. The main causes

Food supply and availability: Indonesia is self sufficient in food production. However, sustainability of production could become an issue: over-exploitation of land and water resources, intensive agriculture in some areas, slash and burn agriculture and deforestation make the topsoil prone to erosion.

Access to food:
o   **Poverty** is a predominant factor that influences food security in Indonesia. Food is available but at a cost that increasing numbers of people find difficult to afford. A sizable part of the population hangs precariously around the poverty line and the situation is not improving. Since 2005, 4 million people have fallen below the poverty line.[4]

According to the depth of poverty, the hotspots are clustered around Papua (poverty rate of 39%), Maluku (32%), NTB (25%), NTT (28%) and Aceh (28%). Other areas of concern are Central and East Java, Sumatra Selatan and Bengkulu in Sumatra. When looking at the concentration of poor people, Java Island emerges as the real hotspot as 75 percent of Indonesia's poor population.

Most people rely on crop harvest, followed by plantation and seawater fisheries for their main source of income. With agricultural productivity remaining stagnant in recent years, high land fragmentation in densely populated regions and erratic rainfall in the eastern part of the country, many people who are dependent on crop production are adversely affected, either falling below or hovering around the poverty line.

o   **Road access**: the lack of infrastructure hinders physical access to markets and to livelihood activities. Poor access is mainly in Papua, Maluku, Nusa Tenggara Timur, Kalimatan and south / east parts of Sumatra.

o   **Female literacy**: the female illiteracy is high in Papua, Nusa Tenggara Timur, Nusa Tenggara Barat, East Java, West Kalimatan and South Sulawesi.

Food utilisation: Many people do not have access to essential infrastructure and services, resulting in poor human development and health outcomes. Malnutrition rates are high and have even risen in recent years in some regions.

o   **Under 5 mortality rate:** In 2004, 38 out of 1000 children under 5 died. Under 5 mortality is the result of poor sanitation, poor water quality, poor nutrition and infectious diseases. The worst provinces are West Nusa Tengara, South Sulawesi and Gorontalo with an U5MR of 92-103/1000 / year.

o   **Stunting:** Indonesia has high stunting rates. The national average is 37% (48% in rural areas). Provinces where over 50% of children are stunted are: Sumatra Utara, Sumatra Barat, Benkulu, Banten, Nusa Tenggara Timur, Nusa Tenggara Barat and Kalimantan Selatan. In Gorontalo and Maluku Utara, 60% of children are stunted.

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[4] Making the New Indonesia Work for the Poor – Overview, The World Bank, 2006.

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o   **Water / sanitation**: Access to safe water is inadequate. Only 48% of households have access to safe water in rural areas. Access to sanitation is a chronic problem, with 80% of rural poor and 59% of urban poor having no access to septic tanks. Less than 1% of Indonesians have access to piped sewerage services.

o   **Infant mortality rate**: Infant mortality has not reduced in the past few years and is close to 40 deaths per 1000 live births. It is largely attributed to infections, perinatal conditions, diarrhoea and therefore to the quality of health care service. Indonesia has the highest maternal mortality in South East Asia with 307 deaths per 100,000 births.

o   **Underweight**: One third of children under five are underweight. Nusa Tenggara Timur and Gorontalo provinces have a rate of underweight above 40%, the worst in the country.

o   **Micronutrients deficiencies**: The diet is in general unbalanced with relatively low intake of protein, fruits and vegetables. The iron deficiency anaemia (IDA) rate for children under 5 increased from 40% to 48% between 1995 and 2001, correlating with a declining quality of food consumption. 30 percent of the population has either no or inadequate access to iodised salt. The worst areas are Nusa Tenggara Barat and Nusa Tenggara Timur and Maluku.

Additional information (not used as an indicator for the IPC):
o   **Diseases**: Indonesia has the largest TB caseload in the world and the numbers are increasing. TB is the number one leading cause of morbidity. Malaria is the other most frequent disease and is endemic in the eastern provinces. Large regions exist where more than 70% of households are more than 5km distant from the nearest health facility.
o   **Education**: High enrolment rates mask the low attendance.

4. Recommendations for WFP interventions

The assessment concluded that food supply and availability are not significant problems. Rather access to food, malnutrition and chronic poverty are the main issues. Multi-sectoral efforts are needed to improve health and nutritional indicators where non food responses are essential.

It is recommended that geographic targeting at district level is done based on the IPC map (see next page).

Food for Education: WFP should revise its objectives to improve the attendance rate amongst children in rural schools. WFP should further support the FRESH initiative as water/sanitation conditions in schools are particularly poor.

Food for Work: in rural areas, depending on the capacity of NGOs, FFW could include soil and water conservation, water harvesting works on farm land, latrine construction in schools as well as rural road construction in very remote areas. Efforts should also be made to use food under proposed Community Development Projects in Madura, Lombok and West Timor.

Nutrition interventions: WFP should investigate the possibility of increasing the micronutrient fortification in biscuits for children under 5, and school children. It is recommended that traditional weaning practices be investigated and documented in order to find the best suitable fortified weaning foods.

Support to TB patients: WFP should increase its assistance to areas outside Jakarta and Surabaya.

Surveillance system: WFP and its partners should provide technical support to the Government of Indonesia for the development of a surveillance system that will collect food security and nutrition data.

Contingency plan: Due to the propensity to natural disasters, a contingency plan is recommended with a matching contingency stock to enable WFP to respond to emergencies in a timely way.

Cash activities: An inventory of cash activities carried out by organizations other than the Government of Indonesia, together with a market analysis in the geographical areas where WFP should focus its efforts, could help guide possible cash/food initiatives.

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Legend

Phase Classification:
1. Generally Food Secure
2. Chronically Food Insecure
3. Acute Food and Livelihood Crisis

Early Warning (Dec. 2006 - June 2007):
- Alert
- Moderate Risk
- High Risk

- Urban Areas
- Zone Boundaries
- Province Boundaries

Defining attributes of areas in phase 1 and 2

Hazards
a. Drought
b. Floods
c. Landslides
d. Civil security
e. Price instability
f. Disease outbreak

Key underlying causes
A. Poverty
B. Structural factors of poor health care services
C. Poor Education
D. Poor economic development
E. Poor transportation infrastructure
F. Conflict
G. Environmental degradation
H. Natural Disaster

Estimated Population in phase
inclusive of pop. at high risk

Projected trend
↑ Improving
↔ No change
↓ Worsening

Confidence Level of Analysis
* Low
** Medium
*** High

Zone 1. Papua Highland
No immediate hazard
B, D
Est. Pop: 1,042,132
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Zone 2. Papua Lowland
f (HIV)
B, C
Est. Pop: 1,424,007
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Zone 20. North Maluku
No immediate hazard
A, B, C, D, E
Est. Pop: 1,661,186
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Zone 4. South & South East Sulawesi
a, b
A
Est. Pop: 8,279,352
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Zone 6. Central & West Sulawesi
No immediate hazard
A, B, C, f (in Poso & Tentena)
Est. Pop: 3,375,025
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Zone 3. South Eastern Island
A, B, D, E
Est. Pop: 6,515,339
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Zone 8. East Kalimantan
a, c
B, C, D, E, G
Est. Pop: 2,821,735
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Zone 7. West Kalimantan & part of East Kalimantan
No immediate hazard
B, C, D, E, G
Est. Pop: 8,299,778
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Zone 9. Madura & Eastern part of East Java
A, B, C, D, E
Est. Pop: 12,169,016
**

Zone 10. Bangka Belitung
No immediate hazard
A, B
Est. Pop: 1,026,963
**

Zone 19. DI Yogyakarta
b, c, e, f
H
Est. Pop: 2,171,730
**

Zone 12. Central Sumatra
b, c
A, B
Est. Pop: 19,180,030

Zone 16. Lampung & Java
b, c, e, f
A, B, C
Est. Pop: 100,943,690
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Zone 11. Bengkulu, Jambi etc.
b, c
A, B, G
Est. Pop: 11,239,523
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Zone 14. Aceh
b, c
A, B, F
Est. Pop: 3,803,315
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Zone 13. Nias, Simeulue etc.
A, B, C, D, E
Est. Pop: 1,171,492
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Note: The map has 2 different periods of validity. The overall phase classification should remain valid till December 2009, since the situation in Indonesia is that of chronic food insecurity, which does not change rapidly, unless there is/are major shock(s) affecting livelihood and/or health status of a large number of people. The second validity of the map is related to Early Warning situation. Since early warnings is based on likelihood of hazards, we believe that there is a need to review the early warning pattern after June 2007, which might also lead to a different phase classification in certain areas.

WFP

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