

# Food Security and Vulnerability Atlas Indonesia 2015: Summary version





## Food Security and Vulnerability Atlas of Indonesia 2015

Copyright @ 2015

Dewan Ketahanan Pangan, Kementerian Pertanian and World Food Programme (WFP)

All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means, without permissions.

Published by: Dewan Ketahanan Pangan, Kementerian Pertanian and World Food Programme (WFP)

The designations employed and the presentation of material in the maps do not imply the expression of any opinion whatsoever on the part of WFP concerning the legal or constitutional status of any country, territory or sea area, or concerning the delimitation of frontiers.

# Substantial progress in achieving MDGs

Indonesia has achieved the first Millennium Development Goal, halving the percentage of its people living in hunger and extreme poverty. The new Government of President Joko Widodo has prioritized food and nutrition in its National Medium-Term Development Plan for 2015-19. To help Indonesia meet its goals, the 2015 Food Security and Vulnerability Atlas identifies which districts are most vulnerable to food and nutrition insecurity, and what makes them vulnerable. It is a powerful tool to ensure that policies and resources have the maximum effect.

Since the first Atlas was published in 2005, and the second edition in 2010, there have been significant improvements at national level in the availability of food. Poverty has been reduced, improving access to food. More households now have access health facilities, and life expectancy has increased. Electricity and roads have reached more areas.

## Overview of the Food Security and Vulnerability Atlas

Indonesia's Law No. 18/2012 defines food security as the condition in which all people, in all households, at all times have sufficient food in both quantity and quality to enable them to live healthy, active, productive and sustainable lives, and that the food is safe, diverse, nutritious, equitably distributed and affordable, and does not conflict with religion, beliefs or culture.

The FSVA reviews 13 indicators available at the district level, chosen for their ability to measure various aspects of food and nutrition security. The FSVA divides these indicators into two sets: chronic food and nutrition insecurity and transitory food insecurity. The transitory indicators describe climatic and environmental factors that affect food insecurity from an availability and access perspective. Within chronic food insecurity, indicators measure food availability, food access, and food utilization. The nine indicators that relate to chronic food insecurity are combined into a single composite indicator to describe the overall district food security situation and to rank the priority level of districts.

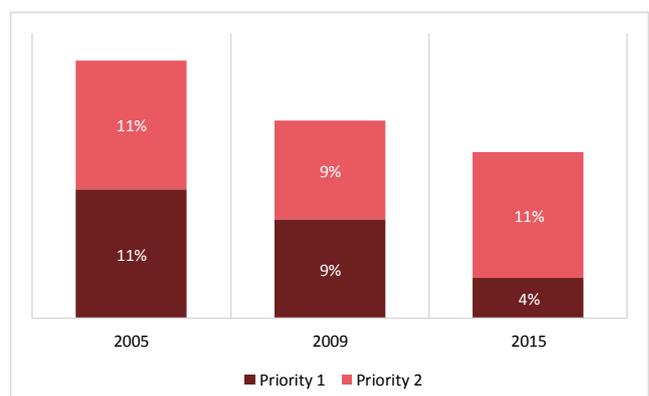
## Food security improving but some areas remain behind

Since 2005, there has been a steady decline in highly vulnerable districts, classified as Priority 1 and 2. Indeed, for most Indonesians, food security improved between 2009 and 2015, largely as a result of improvements in a number of food and nutrition security-related factors. While these results are encouraging, progress may be at risk of stagnating if major challenges are not addressed.

Three areas require particular attention:

- i. improving economic access to food including through continued investments in infrastructure;
- ii. accelerating the prevention and reduction of malnutrition; and
- iii. addressing the increasing vulnerability to climate-related hazards.

### Decline in high priority districts



## Key challenges remain

### Improving economic access to food including through continued investments in infrastructure

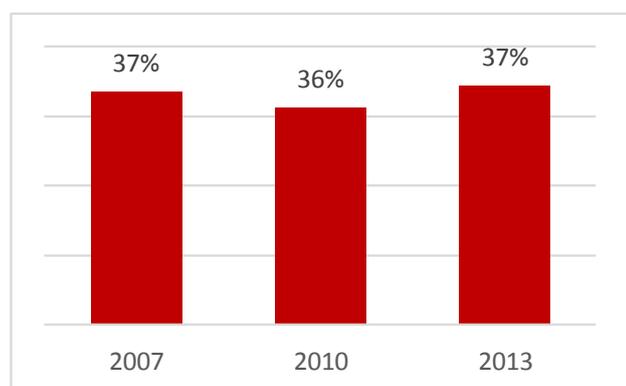
Indonesia has made significant progress in reducing poverty in terms of the percent of people living below the poverty line. However, the number of people classified as poor still remains very high at more than 27.7 million in 2014. Equally concerning is the increase in income inequality. The Gini coefficient in 2013 stood at 0.41- a 14 percent increase since 2007.

Though Indonesia's economy has seen rapid growth, it has begun to slow. The combination of the slowing in economic growth with the increasing levels of inequality mean that the poorest of Indonesians remain at risk to food insecurity.

### Accelerating the prevention and reduction of malnutrition

While there have been encouraging overall improvements in food and nutrition security, it is clear from the data that nutrition security still lags behind. Progress on several health and nutrition-related MDGs has stalled: stunting increased slightly between 2010 and 2013; maternal mortality rose; and infant mortality seems to be stagnant. Indonesia's delay in achieving the MDGs on hygiene is particularly worrisome in light of the knowledge that poor health and malnutrition form a vicious circle.

Prevalence of chronic malnutrition



Malnutrition in Indonesia is not just a problem of the poor: the proportion of stunted children is almost four times as high as the proportion of the population considered poor. For non-poor malnourished people, the barrier to improved nutrition status is not necessarily lack of economic access or government poverty reduction programmes, but rather limited understanding of good dietary and nutrition practices. Poor malnourished people face the additional barriers of economic and social access.

### Addressing the increasing vulnerability to climate-related hazard

Indonesia is one of the most disaster-prone countries in the world, and natural disasters are the main cause of transient food insecurity in the country. According to the Centre for Research on the Epidemiology of Disasters, Afghanistan, China, India, Indonesia, the Philippines and the United States of America are the six countries that were most frequently affected by natural disasters in 2012 and 2013.

Natural disasters, deforestation and climate change have a huge potential impact on food security across Indonesia. The occurrence of extreme climate events that cause significant food crop production loss are mostly associated with El Niño/Southern Oscillation (ENSO) events. A one degree increase in sea surface temperature is expected to have significant negative impact on rainfall in Maluku, Nusa Tenggara Barat, the western parts of Nusa Tenggara Timur, and large portions of Sulawesi Selatan, Sulawesi Utara, Sulawesi Tengah, and Jawa Tengah.

Rainfall variation is likely to be detrimental to sustainable agriculture unless water storage and irrigation systems are improved. Analysis of climate change impacts on rice production in Java suggests that production is likely to be 1.8 million mt lower than current levels in 2025 and 3.6 million mt lower in 2050.

The moratorium on deforestation helped to slow rates beginning in 2011, but the overall forest loss remains alarming.

# Recommendations

---

## **Economic access**

With poverty affecting 27.7 million people, and potentially millions more living just above the poverty line, social assistance and social safety nets serve a critical function in facilitating households' access to sufficient food while longer-term activities are being implemented, such as livelihood strengthening and diversification and the expansion of basic infrastructure and services. In 2014, the Government of Indonesia spent approximately 0.75 percent of GDP on social assistance, below both the regional average and the average for middle-income countries. An increase in budget allocations to social assistance programmes, coupled with reforms aimed at improving the effectiveness and nutrition sensitivity of programmes, could have significant impacts on food access.

## **Nutrition**

A multisectoral approach to reducing and preventing malnutrition in Indonesia is essential, involving a diversity of government agencies, non-governmental organizations, United Nations agencies, civil society and private sector actors. Within the Government, intersectoral coordination can be greatly improved by working to break down sectoral divisions in policy-making and government programmes, not least by improving the nutrition sensitivity of traditional welfare, agriculture and/or climate change programmes. Given the short 1,000 day window of opportunity for intervention, improved timing and quality of data collection on nutritional status would enhance the ability of all sectors to respond.

***"Malnutrition continues to stymie Indonesia's potential, as more than one third of children under five are stunted. Simultaneously, a growing number of adults are overweight or obese, in what nutritionists refer to as the "double burden" of malnutrition***

Social safety net programmes can be a major avenue for improving nutrition outcomes. Currently, the country's largest social assistance programme, the Rice for Poor Households (Raskin) programme, provides subsidized rice to poor households, serving as an income transfer that uses food as its main modality. However, by shifting towards the provision of fortified rice, Raskin could become a cost-efficient way of improving the micronutrient intake of low-income families. It is encouraging that a rice fortification pilot programme is ongoing.

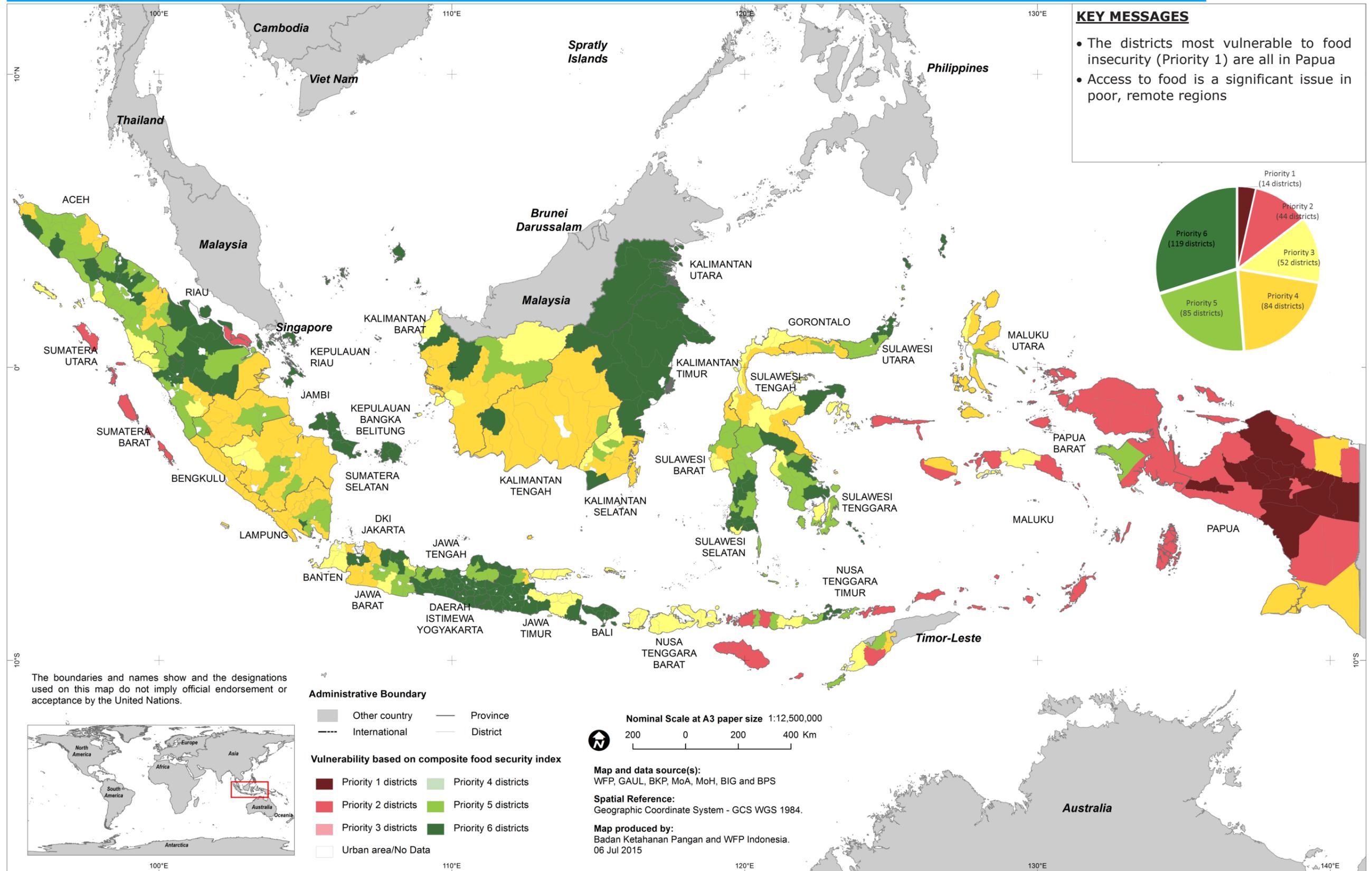
## **Climate change**

The sustainability of water supplies and other environmental services is important to local communities' ability to adapt to climate change. Water management could be enhanced through improved spatial planning and land-use systems, management of conservation and essential ecosystem areas, rehabilitation of degraded ecosystems, and acceleration of the development and rehabilitation of infrastructure to support agricultural activities, including irrigation systems, dams and reservoirs, using new, more resilient technology. Other opportunities include improving early warning systems for both predictable, slow-onset and abrupt, sudden-onset disasters associated with climate change, and establishing incentives for research and development in improving plant resistance to new climate conditions and pests.

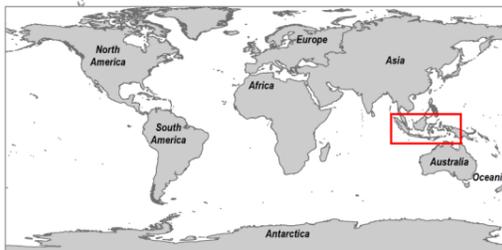
## **Conclusions**

Given its strong economic growth and considerable institutional capacities, the country is well positioned to make good progress on food and nutrition security over the next few years. There is a need for greater focus on poverty reduction, nutrition-sensitive programmes, dietary diversification and climate adaptation strategies. Through increased dialogue and coordination, and more efforts to integrate and harmonize public and private sector initiatives, the country can continue to work towards the achievement of a healthier, more equal, prosperous and developed Indonesia with strong resilience to the inevitable setbacks of natural and other disasters.

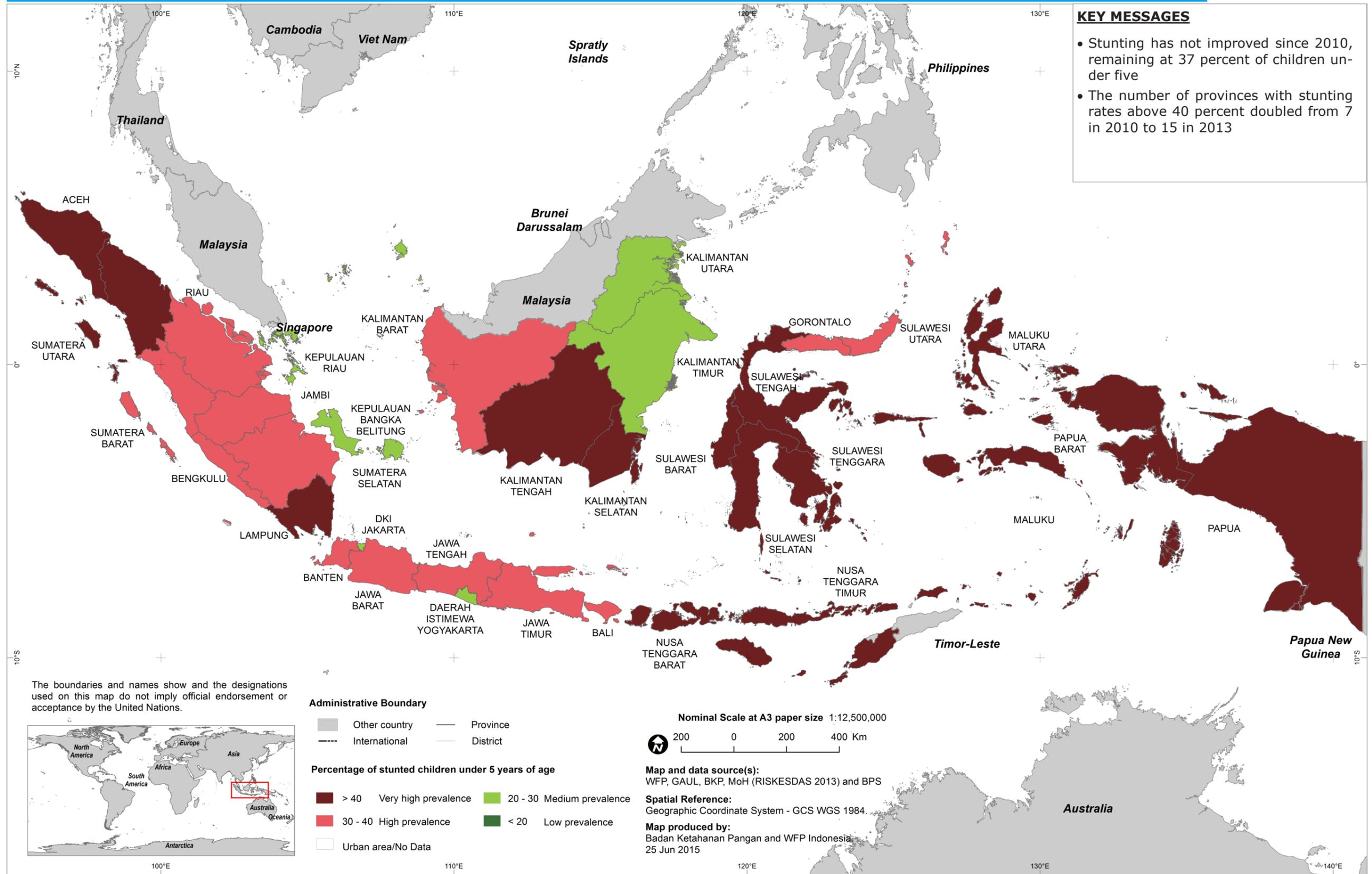
# Vulnerability to food insecurity 2015



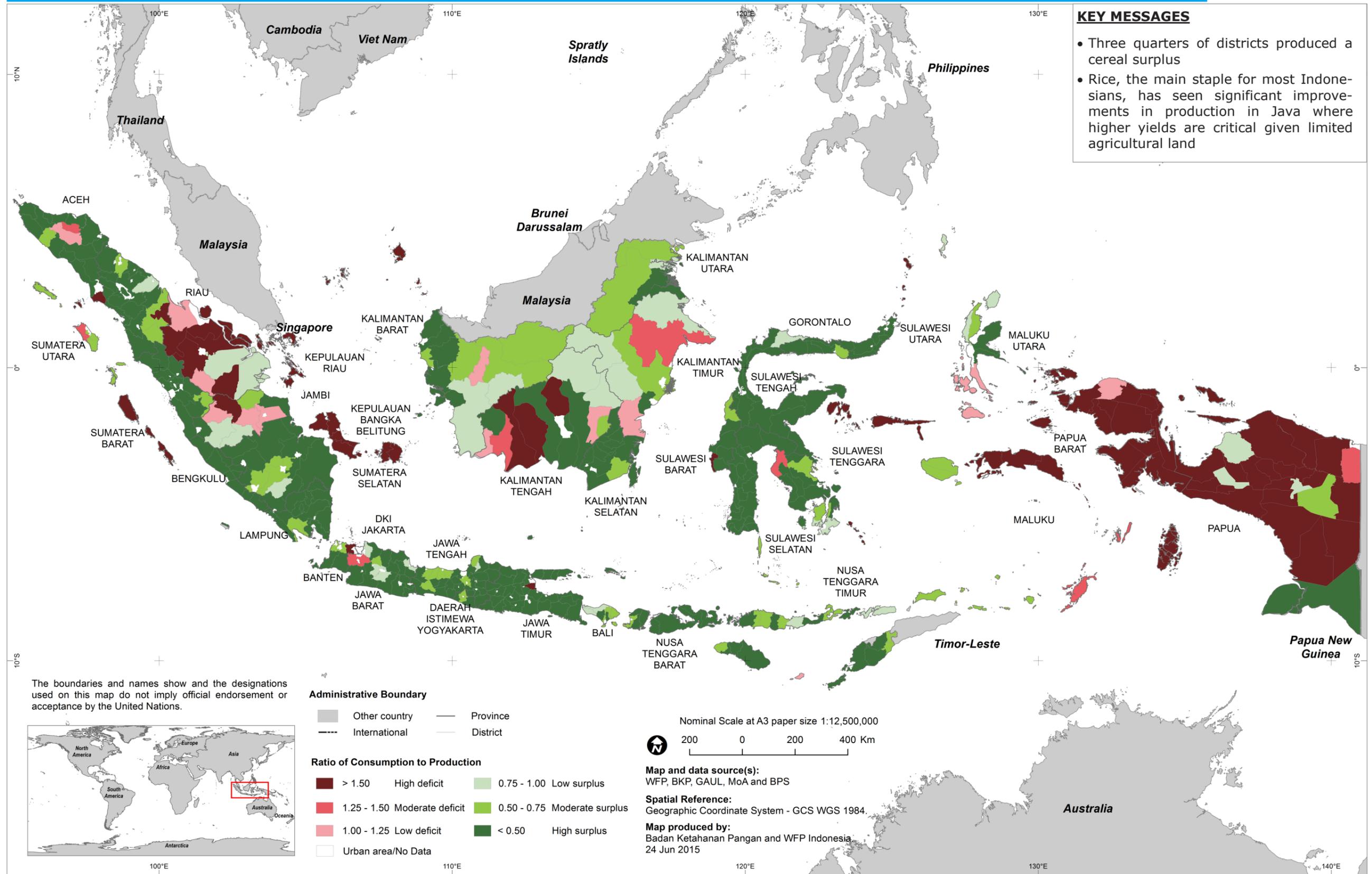
The boundaries and names show and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



# Prevalence of stunting among children under five years of age



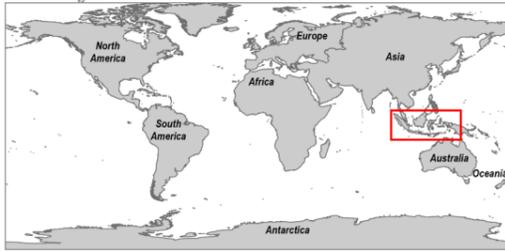
# Ratio of per capita normative consumption to net cereal production



**KEY MESSAGES**

- Three quarters of districts produced a cereal surplus
- Rice, the main staple for most Indonesians, has seen significant improvements in production in Java where higher yields are critical given limited agricultural land

The boundaries and names show and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



**Administrative Boundary**

- Other country
- Province
- International
- District

**Ratio of Consumption to Production**

- > 1.50 High deficit
- 1.25 - 1.50 Moderate deficit
- 1.00 - 1.25 Low deficit
- 0.75 - 1.00 Low surplus
- 0.50 - 0.75 Moderate surplus
- < 0.50 High surplus
- Urban area/No Data

Nominal Scale at A3 paper size 1:12,500,000

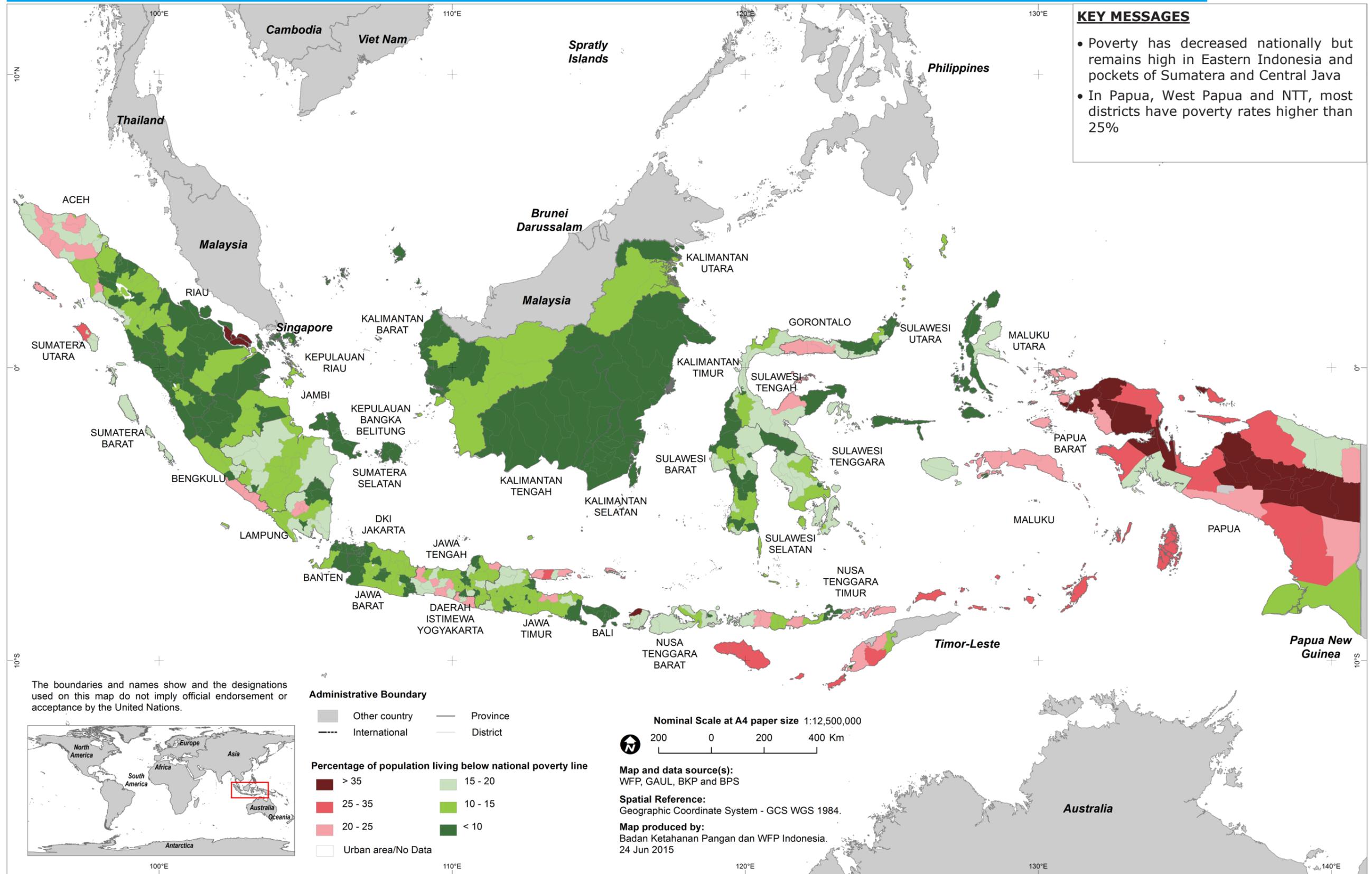
200 0 200 400 Km

**Map and data source(s):**  
WFP, BKP, GAUL, MoA and BPS

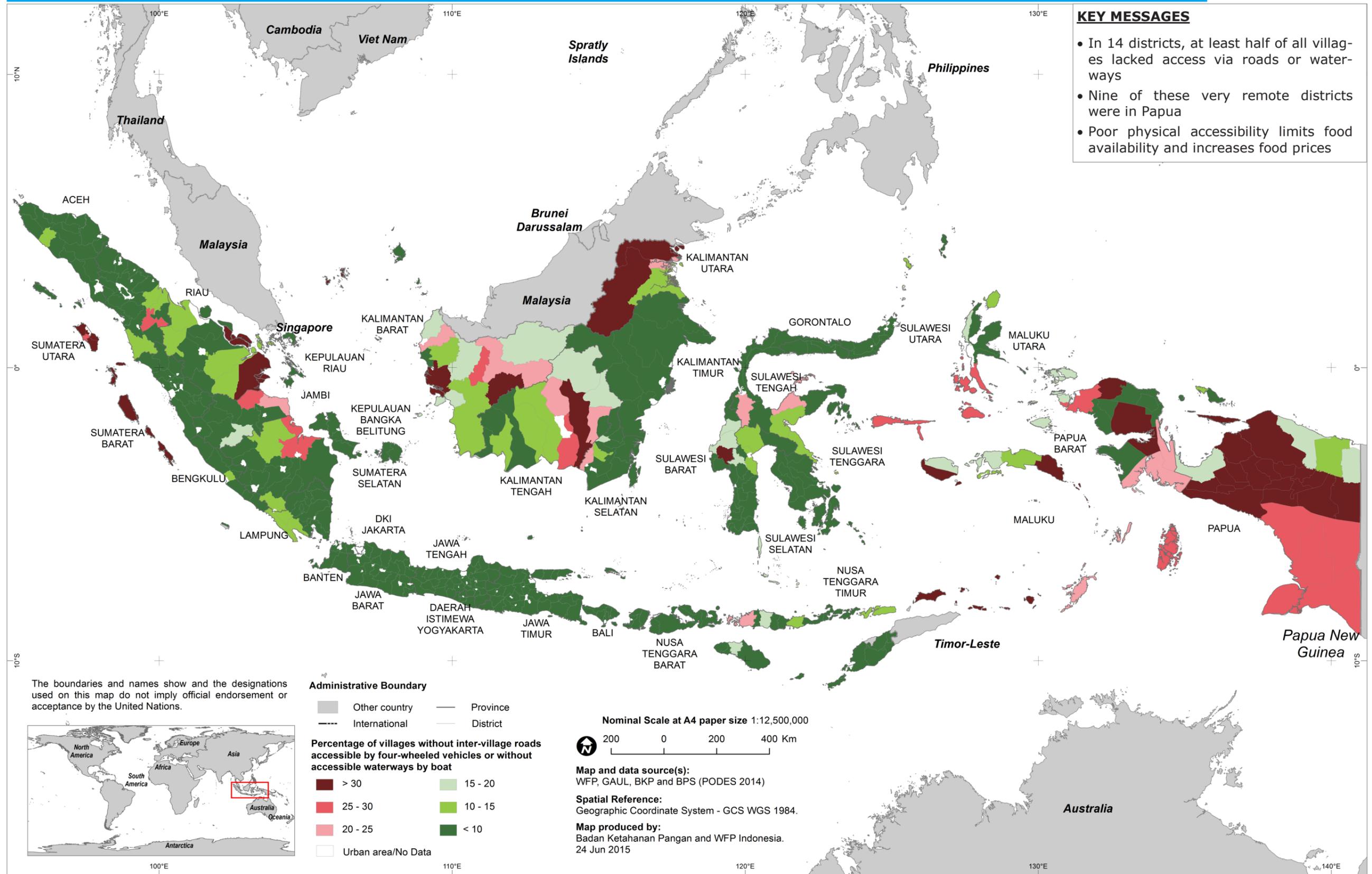
**Spatial Reference:**  
Geographic Coordinate System - GCS WGS 1984.

**Map produced by:**  
Badan Ketahanan Pangan and WFP Indonesia  
24 Jun 2015

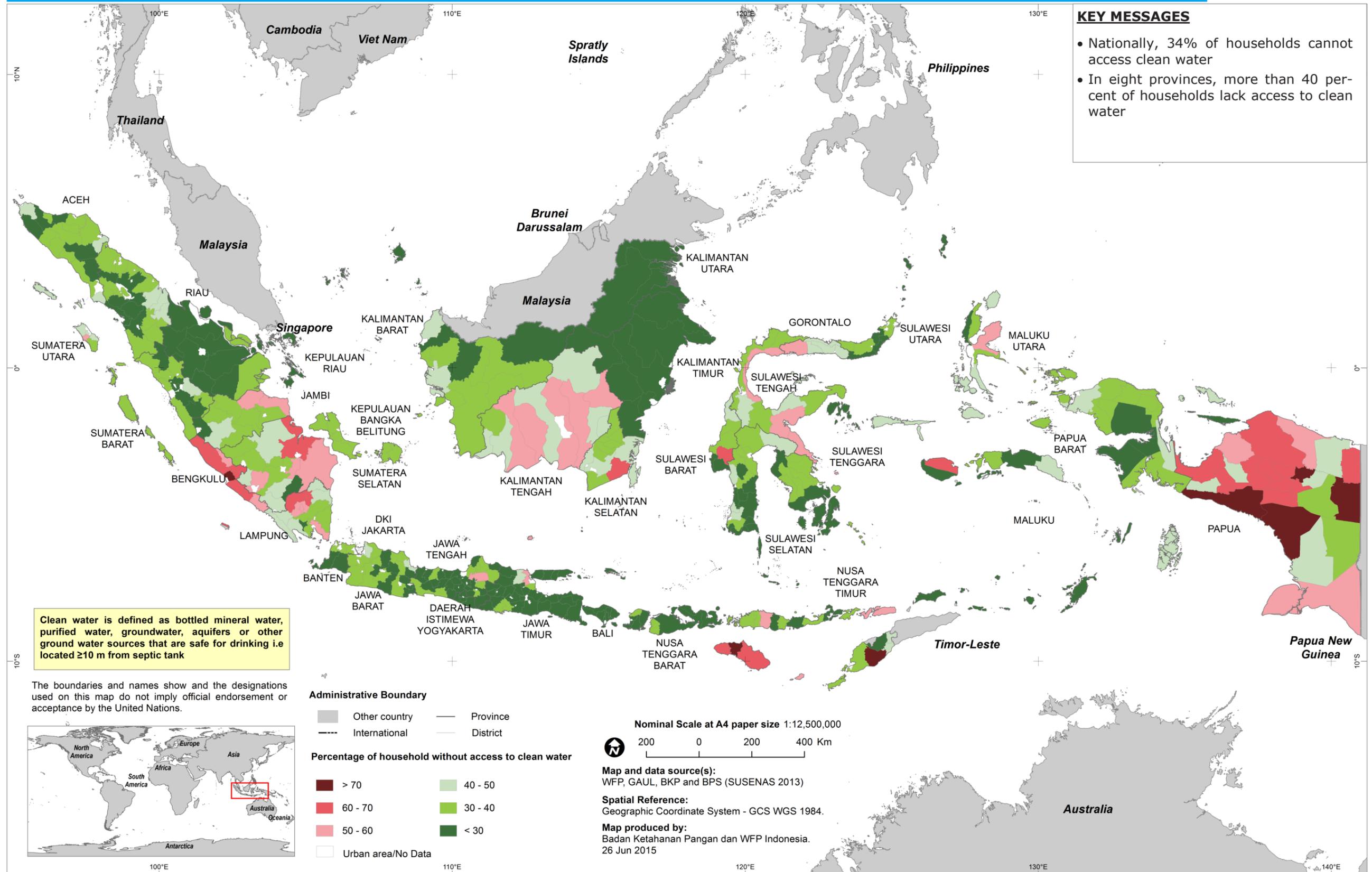
# Population living below poverty line



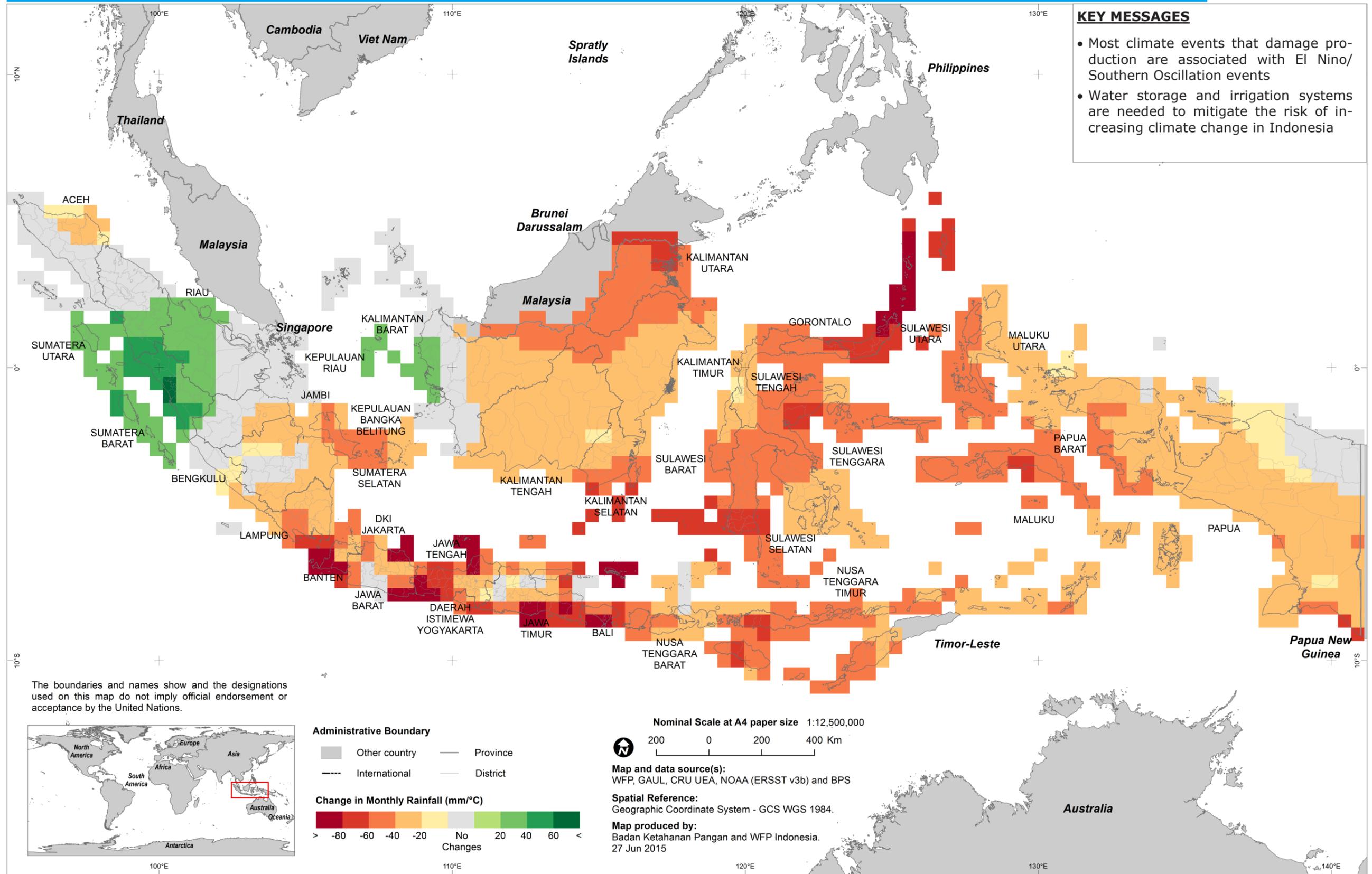
# Road and water transportation access



# Household without access to clean water by considering the distance $\geq 10$ m from septic tank that are safe for drinking water



# Change in monthly rainfall with 1 degree increase in sea surface temperature





<http://bit.ly/FSVA2015>

**Food Security Council Secretariat - BKP**  
Ministry of Agriculture  
Jl. Harsono RM No. 3, Ragunan  
Jakarta, Indonesia  
Food Availability and Vulnerability Center  
Tel. : (62) 21 - 5709004  
Fax. : (62) 21 - 5709001  
<http://bkp.pertanian.go.id>



**World Food Programme**  
Wisma Keiai, 9 Floor  
Jl. Jend. Sudirman Kav. 3  
Jakarta, Indonesia  
Tel. : (62) 21 - 5709004  
Fax. : (62) 21 - 5709001  
<http://www.wfp.org>