



Health Resource Facility

# **Brief on the links between nutrition, inequality and insecurity in Asia Pacific**

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## Executive Summary

### Key Messages

- Food and nutrition insecurity continue to be a prominent problem in East Asia Pacific countries, reflecting patterns of unequal distribution of economic growth.
- A mixture of deprivation, political, social and economic inequalities and shocks are linking poor nutrition outcomes with civil unrest.
- Food price volatility and political unrest further threaten the prospects of advancing towards better and more equally distributed development outcomes.
- Willingness to improve nutrition outcomes and to reduce inequalities can help to improve political and economic stability.

## 1. Introduction

This brief aims to explore the links between nutrition, food price stability and civil unrest in Asia Pacific and the role of inequality in connecting these, with a focus on Indonesia, Papua New Guinea, Timor-Leste and Solomon Islands as case study countries. There are numerous factors that may contribute to civil unrest. We focus on the role of food prices as well as wider social inequalities and exclusion, manifested (*and indeed perpetuated*) by high rates of undernutrition. '*The politics of undernutrition have long been neglected*' (Gillespie et al. 2013) and we aim to inform this debate.

We begin with a short overview of inequalities in nutrition. This is followed by a review of the recent food price shocks and the mobilizations that followed them. We provide some preliminary conclusions at the end.

## 2. Nutrition inequalities in Asia Pacific

The East Asia Pacific (EAP) region has a relatively low malnutrition prevalence compared to other parts of the world (UNICEF, WHO and World Bank 2012)<sup>1</sup>. However, these regional trends are highly dependent on China's success (Patel 2009), and for some other particular countries in the region the levels of malnutrition are still comparable to those found in South Asia, one of the regions with the worst nutrition outcomes in the world. According to the latest available national data<sup>2,3</sup>,

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<sup>1</sup> 12 per cent stunting, 5 per cent underweight and 5 per cent overweight in EAP compared to 25 per cent, 15 per cent and 7 per cent respectively at the global level

<sup>2</sup> Data on nutrition is particularly scarce. For example, Alkire (2013) has recently pointed out that in 2011, of the 19 countries of East Asia and the Pacific, data on malnutrition was available for only one of them (ESCAP). Similarly, of the four EAP countries here, only Timor-Leste had adult BMI data available in the WHO BMI dataset.

<sup>3</sup> There are different measures of malnutrition. Although the indicator used in the MDGs is underweight prevalence, there are some arguments in favour of replacing underweight as the

(Table 1) stunting in Solomon Islands is around 33 per cent, and close to 40 per cent in Indonesia. The situation in Papua New Guinea and Timor-Leste is striking, with 48 per cent and 58 per cent of children stunted respectively.<sup>4</sup>

**Table 1: Child malnutrition indicators, selected EAP countries**

Country	Latest Year	Severe wasting	Wasting	Overweight	Stunting	Underweight
Indonesia	2010	5.4	12.3	12.3	39.2	18.6
Papua New Guinea	2010	NA	16.2	NA	48.2	27.2
Solomon Islands	2007	1.4	4.3	2.5	32.8	11.5
Timor-Leste	2009	7.6	18.9	5.8	57.7	45.3

Source: UNICEF-WHO-The World Bank: 2011 Joint child malnutrition estimates dataset.

Nutritional outcomes are unequally distributed within countries. Differences between girls and boys are not generally very large (UNICEF 2011) but other disparities are salient. For example, evidence in Indonesia shows maternal and new born health outcomes and service coverage vary considerably across provinces, with the islands of Papua and West Papua, Nusa Tenggara and Maluku faring the worst in the country (Thomas and Yusran 2013). In Papua New Guinea and Timor-Leste, there are also differences by location and rural children have a much higher stunting prevalence than urban children (Table 2)<sup>5</sup>. Wealth inequalities are marked in Timor-Leste, children in the poorest quintile have 16 percentage points higher stunting prevalence than those in the richest quintile.

**Table 2: Malnutrition disparities (stunting prevalence per cent)**

	Male	Female	Ratio M/F	Urban	Rural	Ratio U/R	Poorest	Poorer	Middle	Richer	Richest	Ratio Richest/Poorest
Indonesia	37	34	1.1	31	40	0.8	43	39	34	31	24	0.6
Papua New Guinea	46	39	1.2	27	46	0.6	-	-	-	-	-	-
Solomon Islands	36	32	1.1	-	-	-	-	-	-	-	-	-

main anthropometric indicator for children (see for example Black et al. 2013). Stunting is a better indicator of chronic malnutrition and is highly prevalent in all developing regions of the world.

<sup>4</sup> In many developing countries, the burden of disease caused by poor nutrition is shifting and many now face a 'double burden' of undernutrition and obesity (Gillespie et al. 2013). There is some evidence of this in the Pacific, linked to changes in dietary patterns and lifestyle (Secretariat of the Pacific Community 2011).

<sup>5</sup> Although underweight prevalence rates are generally lower than stunting ones, some of these inequalities are marginally stronger when looking at underweight rather than stunting prevalence, The general pattern of inequalities is similar

Timor-Leste	51	56	0.9	49	61	0.8	63	64	61	55	47	0.7
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Note: the ratios presented in this table are an indicative of disparities between groups. A ratio of 1 would indicate that stunting is as prevalent in girls as it is in boys, for example. Lower ratios indicate higher inequality against the disadvantaged group.

Source: UNICEF. Statistical country profiles [http://www.childinfo.org/country\\_list.php](http://www.childinfo.org/country_list.php)

Outcomes in child nutrition reveal a larger set of deprivations and more general socioeconomic inequalities within countries. Availability and access to good quality food, clean water and sanitation, health services and protection against diseases<sup>6</sup> are all factors affecting nutrition (Garcia 2012; ODI 2012; WB 2006) and are disproportionately lacking for poor people and marginalized groups.

Moreover, existing disparities can be exacerbated by shocks. Events such as food and financial crises can be disastrous for vulnerable groups, with particularly harmful consequences on children's health, education, and overall development (Patel 2009). These risks and their consequences are not evenly spread through the population. Bhutta et al. (2008) estimate that following the East Asian crisis of 2008, stunting increased 45 per cent for the poorest quintiles while only 20 per cent for the next two quintiles. In Indonesia, stunting rates for the poorest quintile have increased in recent years (from 40 per cent in 2007 to 43 per cent in 2010), while at the same time they have been falling for the wealthiest quintile (30 per cent to 24 per cent in the same period) (Thomas and Yusran 2013). Despite rapid economic growth and declining poverty levels in Asia, the gaps between social groups have not declined and have even widened in some countries (Kabeer 2010).

Finally, because the harmful effects of malnutrition carry over from mothers to children<sup>7</sup> and into adulthood, inequalities in nutrition reinforce other disadvantages and create a circular relationship perpetuating inequality. There is a strong body of evidence showing that undernutrition is a risk factor for poor motor and cognitive child development (Black et al. 2013). The Young Lives panel study<sup>8</sup> for example found a strong association between stunting in the early months of life and the educational performance of the same children later in life. These effects carry into adulthood and become a drag on the economy as a whole. Impairments in cognition and lower educational attainment have direct effects in labour productivity; a World Bank (2006) study found that child malnutrition can cost an individual up to 10 per cent of his or her potential lifetime earnings, as well as compromise maternal health and increase the risk of transmission of diseases such as HIV and tuberculosis.

These disparities in nutrition outcomes are worrying. They are not only morally unacceptable but also constitute barriers for progress in human development (Watkins 2013). Moreover, sharp multidimensional inequalities between identity groups - horizontal inequalities - can provide a general motive for political

<sup>7</sup> In this regard, inequalities in nutrition outcomes can also be linked to gender inequalities in health, education and empowerment. Preventing adolescent childbearing through incentives for girls to stay in school, implementation of minimum marriage age laws and communication and social mobilisation in favour of education and against early marriage can play crucial roles in improving maternal and new-born nutrition (UNSCN 2010 in ODI 2012; WB 2006).

<sup>8</sup> <http://www.qeh.ox.ac.uk/research/groups/yl>

mobilization (Stewart 2010), especially when those inequalities are reproduced, undermining the economic prospects of such groups and their confidence in the government's ability to rule fairly (Kabeer 2010). For example Mancini (2010) finds that a wide gap in child mortality between ethnic groups was the strongest factor increasing the occurrence of violent ethnic conflict in Indonesian districts, even when other horizontal inequalities are factored in.<sup>9</sup> Child mortality is a particularly disturbing and visible type of inequality, exposing the destitute situation of the most marginalized groups in society and can be instrumentally used to mobilize action (Mancini 2010). Considering that 45 per cent of under-five child deaths are associated with malnutrition (Black et al. 2013), inequalities in malnutrition are contributing through this way to insecurity and conflict.

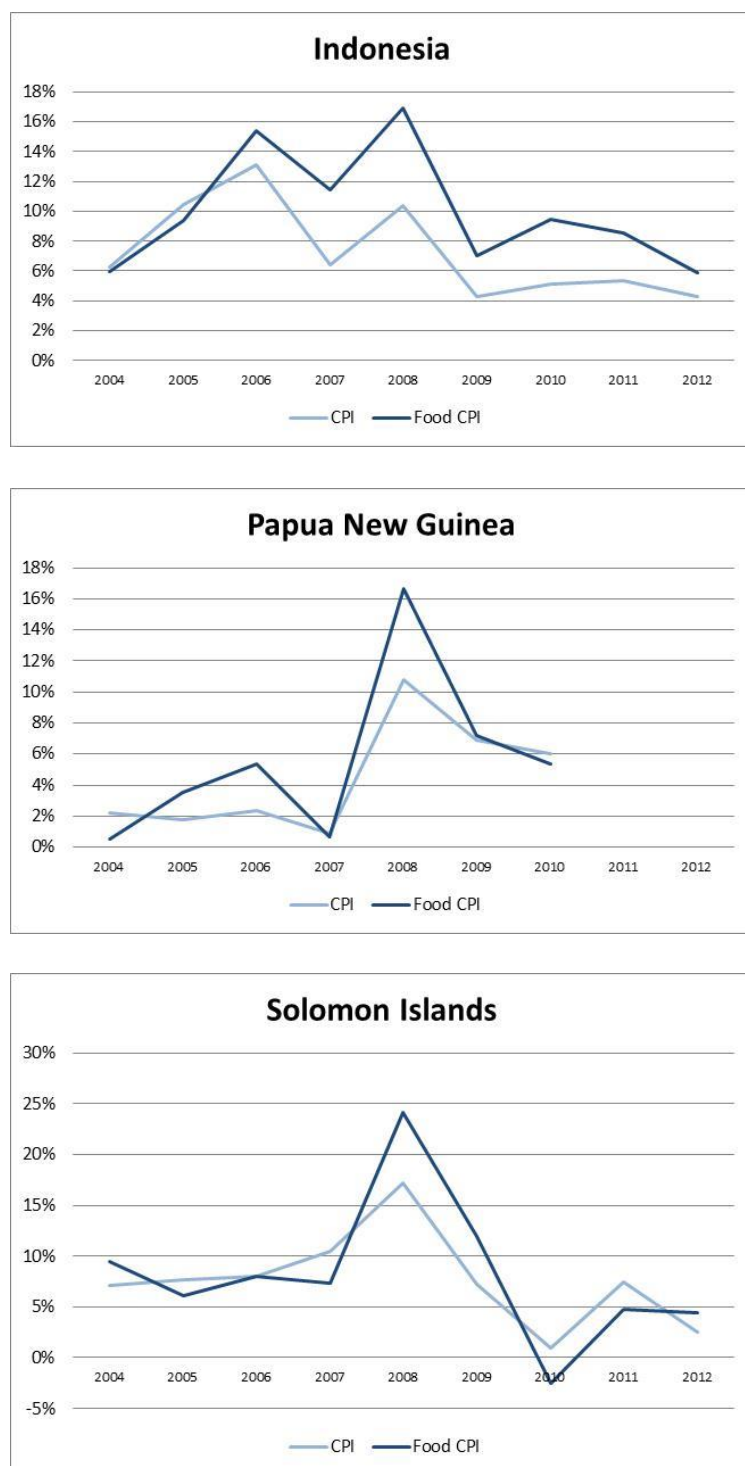
### **3. Food prices and political instability**

The world recently experienced two major food price increase episodes, in 2007-08 and in 2011-12. The 2008 price hike was felt intensely all over Asia, while the most recent episode was particularly strong in Western and Eastern-Asia. While there has been a slow decline since then, several countries in the region are still struggling with high food prices. Indonesia for example had a 12.6 per cent rise in food prices in October this year, in India the price of onions is three times higher than last year, and the price of rice in Afghanistan and the Philippines remains much higher than last year (FAO 2013b). These food price increases often happen at a higher rate than aggregate inflation, as has been the case in Indonesia, Papua New Guinea and to a lesser degree in Solomon Islands (Figure 1).

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<sup>9</sup> Years of education, the proportion of landless agricultural labourers, male youth unemployment

**Figure 1: Food and aggregate Consumer Price Index (CPI) growth 2004-2012. Selected countries**



Source: Author's calculations using data from Faostat

Compared to people in industrialized countries, poor people in developing countries spend a much larger share of their incomes on food – roughly 75–80 per cent (Brandt and Otzen, 2007). Households in the poorest quintiles also have higher food expenditures than more wealthy households. In Colombia, the share of the monthly budget spend on food by the poorest households is almost double that of the richest (Rodriguez Takeuchi and Imai 2013). For the lowest quintile, the percentage of

household income spent on food is over 80 per cent in Lao PDR, 75 per cent in Mongolia and 76 per cent in East-Timor while, in Asia, the average figure is around 60 per cent (Secretariat of the Pacific Community 2011; Patel 2009). The higher the share of income spent on food, the higher the risk of food price shocks. For example, an increase of 50 per cent in the price of staple foods would decrease real income of the average poor Asian household by 30 per cent (Patel 2009).

While the immediate effect of a price increase is the loss in households' purchasing power, especially for those poorer households that spend a larger share of their budget on food, the price shock could have further consequences as households try to adapt for example by selling assets, reducing the quantity, quality and variety of food consumed, or cutting other non-food expenditures such as health care and education (FAO 2008). At the individual level the effects are felt in health, growth and development; at the family level in the intra-household distribution of resources to cope with the food price volatility; and at the national level, resulting in a slowing of economic development, increases in social inequities, and social dysfunction (Darnton-Hill and Cogill 2010).

Such large and unexpected price movements, even when they are short-lived, are likely to be harmful to people's living standards in developing countries, debilitating households' ability to respond to future shocks and limiting their possibility to escape poverty (FAO 2011). It is estimated that due to the extra 105 million people pushed into poverty by the 2008 food crisis, at least seven years of progress towards global poverty reduction were lost (Ivanic and Martin 2008).

There is evidence confirming that rapid increases in food prices can lead to relatively rapid increases in maternal and child undernutrition. For example, the experience in Asia in the late nineties suggests the following (Bhutta et al. 2009):

- increased rates of maternal anaemia by 10–20 per cent,
- increased incidence of low birth weight by 5–10 per cent,
- increased rates of childhood stunting by 3–7 per cent,
- increased rates of wasting by 8–16 per cent.

There is also evidence that rising food prices have acted as a catalyst for political unrest, especially when added to other local concerns. In 2007-08 food prices were linked to events of political unrest in around 30 countries (Earth Policy Institute 2008), and the 2011 uprisings that turned into the Arab Spring were related to food prices (Schneider 2008, Lagi, Bertrand, and Bar-Yam 2011 in Hossain and Kalita n.d). In Asia these movements contributed to the fall of an elected government in Malaysia (Changchui 2008 in Patel 2009) and spurred protests elsewhere in Asia (Table 3).



**Table 3: Food price unrest 2007-08. Asian countries**

Country	Date	Description
Thailand	April 2008	Rice is now so valuable that thieves have taken to stealing it out of fields at night; the army is now being used to prevent food theft.
Bangladesh	April 2008	Twenty eight people were injured after ten thousand workers rioted in the capital, Dhaka, demanding higher pay to cover fast-increasing food costs. Rice prices in Bangladesh have doubled in the last year.
Philippines	February-April 2008	In February, the Philippines, the world's largest rice importer, made a direct appeal to Vietnam asking it to guarantee rice supplies. In April, the government deployed troops to deliver grain to poor areas in the capital. Amid growing fears of shortages, the government has also asked fast-food restaurants to serve half portions of rice.
Indonesia	January 2008	More than 10,000 people took to the streets in Jakarta on January 14 to protest soybean prices that more than doubled in a year, increasing the cost of the Indonesian soy-based staple, tempeh.
China	November 2007	Inflation in China is the worst it has been in more than a decade and food inflation has reached 18.2 percent. Cooking oil is now so expensive that 3 people were trampled to death in November in a stampede to grab bottles at a reduced price.
Mongolia	April 2008	More than 20,000 people flooded into Mongolia's capital to demand that the government do something about rising food prices that had nearly tripled in some cases.
Vietnam	2008	More than 15,000 workers at a Vietnamese shoe factory went on a two-day strike to draw attention to how hard they were hit by rising prices.
Singapore	2008	Ten people were detained by police last month after they held a rally, without a permit, to protest rising living costs.

Source: Earth Policy Institute (2008). *Food Price Unrest around the World, September 2007- April 2008* and AFP (2008). *High food prices seen leading to strikes, protests in Asia*  
[http://www.google.com/hostednews/afp/article/ALeqM5h30KNpfGfxd\\_IT9I\\_cQMKNSymXEA](http://www.google.com/hostednews/afp/article/ALeqM5h30KNpfGfxd_IT9I_cQMKNSymXEA)

This relationship is more than anecdotal. Cross country studies point to a direct relationship between food prices and different forms of political unrest (Verpoorten and Arora 2011; Arezki and Bruckner 2011; Brinkman and Hendrix 2011, among others). A relationship has also been found between poor development and unrest. Berazneva and Lee (2013) showed that limited food availability and low child nutrition and health outcomes resulting from restricted access to food, were important factors in explaining the 2007-08 unrest in Africa. Poor child health and malnutrition as well as rising commodity prices have also been linked with armed conflict (Pinstrup-Andersen and Shimokawa 2008; Besley and Persson 2008), a more extreme form of insecurity.

However, deprivation is not the sole cause of civil unrest and insecurity. The motivation of the so called 'food riots' is not necessarily only 'hunger'; other grievances such as such as wages, taxes, corruption, financial crisis, austerity

measures and anti-authoritarian discontent are also often involved (Hossain and Kalita n.d). In this sense, food price increases and deterioration of the nutrition situation can act as triggers in collective action. This happens because food is such a basic necessity, powerful enough to mobilize people who otherwise would not engage (Verpoorten and Arora 2011), and because such visibly unfair situations can be used to encourage mobilization (Mancini 2010).

The recent food price crises, and the popular mobilizations that followed, have underscored the need for social protection programmes and safety nets as vehicles to address risk, vulnerability and social exclusion. Targeting of social protection programmes can help to protect those most vulnerable to food price shocks and malnutrition. Such safety nets can improve access to food and reductions in hunger. They can also strengthen livelihoods and promote longer-term development by reducing the long term consequences of malnutrition on human capital and productivity (Tiba 2011; FAO 2013a). Addressing other underlying and immediate causes of undernutrition, such as through targeted micronutrient supplementation, promotion of good infant and young child feeding practices and disease prevention can also help break the inter-generational cycle of undernutrition and poverty.

Poverty and inequality as well as limited political freedoms and participation mechanisms are important in explaining the relationship between food price shock and civil unrest (Arezki and Bruckner 2011; Berazneva and Lee 2013). These movements represent a much wider popular consensus about the rights to adequate provisions of basic needs, and the accompanying official responsibilities to protect those rights (Hossain and Kalita n.d).

The lack of institutionalized mechanisms for political participation, as well as the exclusion of particular groups from political life, are important in explaining the link between poor and unequal nutrition outcomes, food price shocks and civil unrest and instability. Countries in the EAP region show worrying situations in this regard. In Melanesia for example, politics is based on 'big men' and their clan supporters (Laking 2011), leaving little room for consensus politics and the inclusion of minorities and different views in the political agenda. In EAP countries such as Indonesia, Fiji, Cambodia, The Philippines, Thailand and Myanmar there is evidence of ethnic groups facing political exclusion<sup>10</sup> and in some cases even repression (Minorities at Risk Project 2009). Papua New Guinea, the Solomon Islands, and Timor-Leste in particular, have recent histories of armed conflict and still struggle with maintaining security. Intergroup conflict is not uncommon there as well as in Fiji Islands, Tonga, Vanuatu (Laking 2010), and Indonesia<sup>11</sup>. Restrictions to participation are still the norm in the Solomon Islands and parochial or ethnic-based agendas still dominate in Timor Leste. Demands around deprivations manifested in poor nutritional outcomes are fuelled by these exclusionary systems of participation and intra-group conflicts, increasing the risk of insecurity, civil unrest and political instability.

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<sup>10</sup> Acehnese, Chinese and Papuans in Indonesia; East Indians in Fiji; Vietnamese in Cambodia; Moros in the Philippines; Malay-Muslims in Thailand; Rohingya, Zomis, Karens and Shans in Myanmar

<sup>11</sup> Between Christians and Muslims (in the Moluccas Islands and on Sulawesi) and between the indigenous Dayak ethnic group and Madurese settlers in West Kalimantan (on the island of Borneo) (Marshall and Jagers 2010)

Finally, it is worth mentioning that there is also a feedback loop from political instability to further deterioration of food security and nutritional outcomes. Countries with pre-existing weak capacity find it even harder to respond in critical situations to design and implement policies to respond to shocks, stabilize prices, put in place safety nets and mobilize resources (Brinkman and Hendrix 2011).

#### **4. Conclusion and policy recommendations**

Food and nutrition insecurity continue to be a large scale problem in some EAP countries reflecting patterns of unequal development. Inequalities in nutrition outcomes are prominent and shocks such as food price volatility further threaten the prospects of advancing towards better and more equally distributed development outcomes.

In a recent review of the political and policy processes of undernutrition, Gillespie et al. (2013) call for an increased recognition of government accountability to lead in the provision of services needed to meet short-term shocks. The evidence from 'food riots' and other civil movements responding to food price volatility shows that citizens in many countries are already making that same call. However, the calls are not just about hunger and poverty. The literature on horizontal inequalities (Kabeer 2010; Stewart 2010 among others) suggests that a mixture of deprivation, political, social and economic inequalities and shocks are linking poor development outcomes with civil unrest.

Indonesia, Papua New Guinea, Solomon Islands and Timor-Leste are characterized by poor and unequal nutrition outcomes, as well as by challenges in transitioning to a more open and participatory political system. This increases the risk of insecurity, civil unrest and political instability in these countries.

The vicious cycle of food insecurity and political instability can be transformed (Brinkman and Hendrix 2011). Child malnutrition is an indicator of unequal development outcomes, in particular those between groups, and can exacerbate a larger set of deprivations and inequalities, for example in education and cognitive development, labour productivity and maternal and new born health. Reducing the risk of instability could be achieved with investments in nutrition that address uneven development outcomes. Political capacity and willingness to respond to shocks and protect those most vulnerable, to improve nutrition outcomes and to reduce inequalities in this domain can help to achieve stability and even bring a 'peace dividend' (Brinkman and Hendrix 2011) in conflict driven societies.

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