



Global and Regional Food Consumer Price Inflation Monitoring

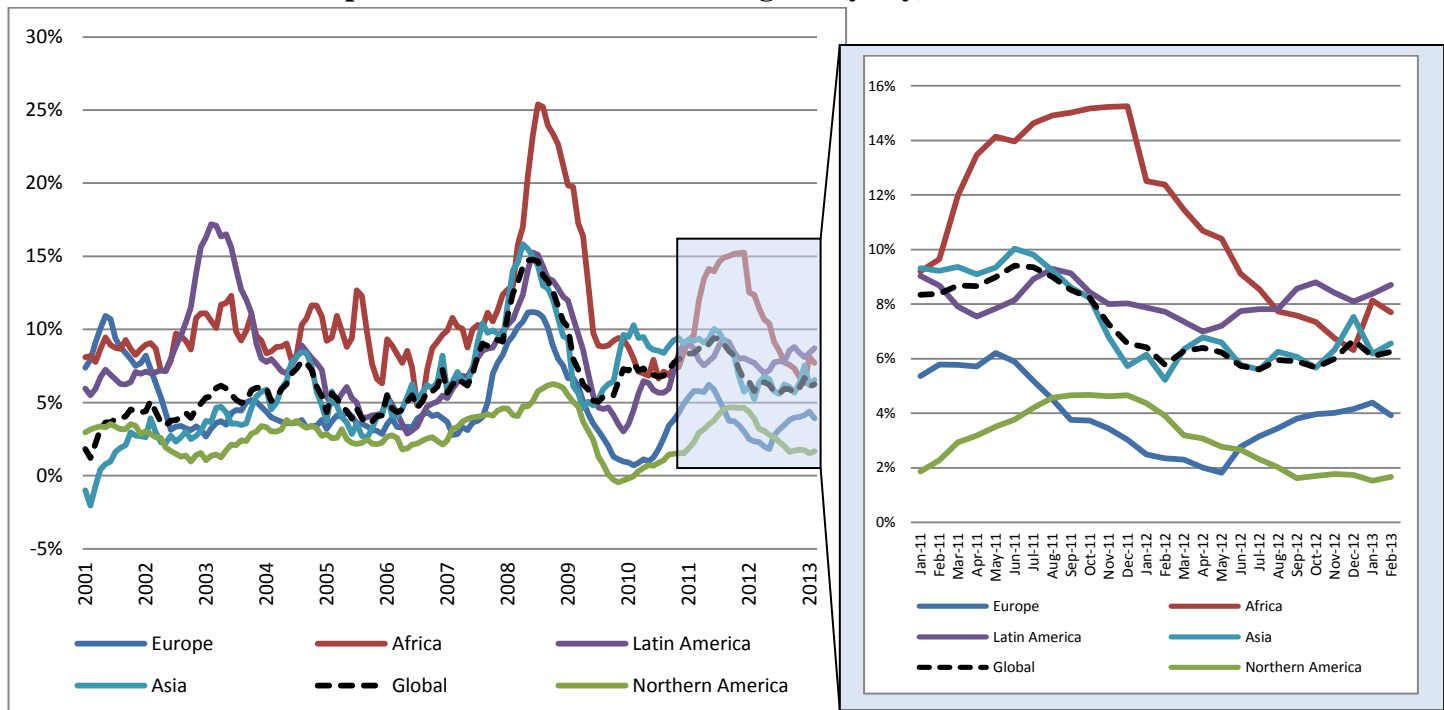
October 2013 – Issue 2

Global Overview

Consumers at global level saw food price inflation up by 6.3 percent in the twelve months to February 2013 (Chart 1), following a 6.1 percent increase in January. Annual food price inflation in the first two months of 2013 has been mostly driven by Africa (Table 1), where prices rose by 7.7 percent in February 2013 and 8.1 percent in January 2013 on a year-over-year basis.

Compared with February 2012, the highest price increases have been faced by consumers in Southern Asia (+13.8%), followed by Western Asia (+11.2%) and Central Africa (+11%). The lowest food price inflation has been recorded in Australia and New Zealand (+1.1%), while in Eastern Asia food prices slightly decreased (-0.5%).

Chart 1 Consumer food price inflation – Global and regions (y-o-y)



Source: ILO - Laborsta (data on country food CPIs), FAO Statistics Division (calculations)

Table 1 Trends in global and regional consumer food price inflation

Growth rates in percent	2010	2011	2012	Jan. 2013 (y-o-y)	Feb. 2013 (y-o-y)
World	7.3	8.4	6.1	6.1	6.3
<i>Africa</i>	7.5	13.6	9.2	8.1	7.7
Southern Africa	1.5	7.0	7.2	6.3	6.1
Western Africa	8.8	8.8	8.6	7.6	8.5
Northern Africa	11.5	9.4	8.4	7.5	5.6
Central Africa	17.3	15.0	12.7	10.6	11.0
Eastern Africa	4.1	23.4	10.4	9.4	8.5
<i>Americas</i>	4.1	6.6	5.8	5.7	5.9
South America	7.3	9.5	8.4	9.6	10.0
Central America	3.6	5.9	6.8	5.5	5.7
Caribbean	4.5	7.1	5.7	6.9	6.4
Northern America	0.8	3.7	2.6	1.5	1.7
<i>Asia</i>	9.1	8.7	6.2	6.2	6.6
Eastern Asia	6.6	10.6	4.5	-0.4	-0.5
South-Eastern Asia	6.8	2.4	4.7	5.3	7.1
Western Asia	8.4	6.3	11.4	12.5	11.2
Southern Asia	12.4	8.8	8.1	13.2	13.8
<i>Europe</i>	2.2	4.9	3.0	4.4	3.9
Southern Europe	-0.1	2.5	2.5	3.0	2.5
Eastern Europe ¹	4.8	8.3	3.4	6.4	6.1
Northern Europe	1.8	5.1	3.0	3.6	3.2
Western Europe	1.0	2.3	2.9	3.3	2.6

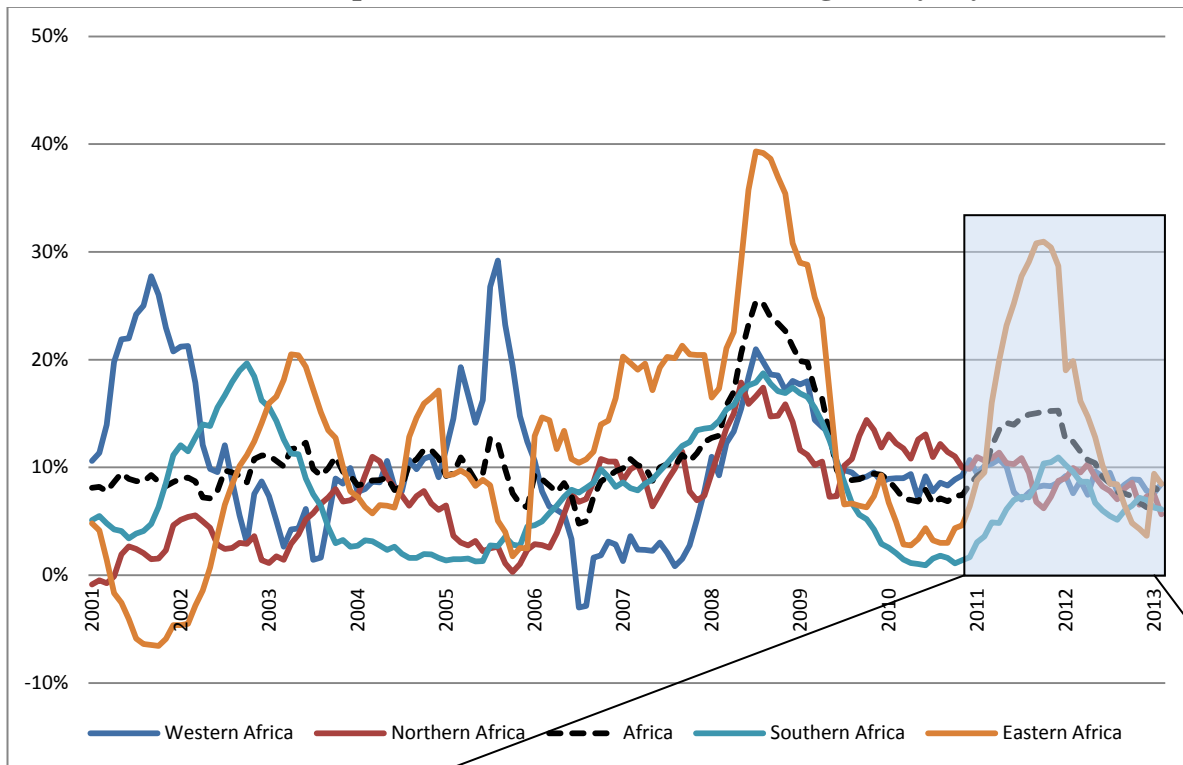
Source: ILO - Laborsta (data on country food CPIs), FAO Statistics Division (calculations)

¹ Estimates for this sub-region have been significantly revised compared with the previous release. This is essentially due to the inclusion of Russia in the sub-regional aggregate. Please refer to Box 2 on data revisions for more detailed explanations.

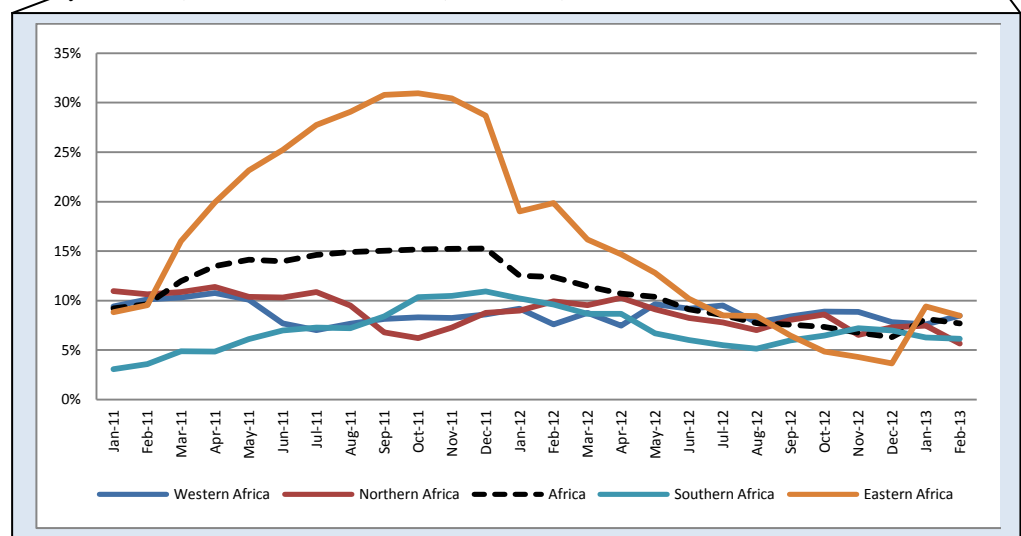
Regional focus: Africa

Consumers in Africa faced increasing inflationary pressures in January and February 2013, with a year-over-year increase in food prices by 8.1 and 7.7 percent respectively, up from 6.3 percent reached in December 2012. Food price inflation strengthened in Eastern Africa (Chart 2), in particular in Malawi where households faced a 27.3 percent year-over-year rise in food prices in January and 32.2 percent in February². This was driven by sharp increases in maize prices and a continued depreciation of the national currency, which increased the value of imports³.

Chart 2 Consumer food price inflation – Africa and sub-regions (y-o-y)



Source: ILO - Laborsta (data on country food CPIs), FAO Statistics Division (calculations)



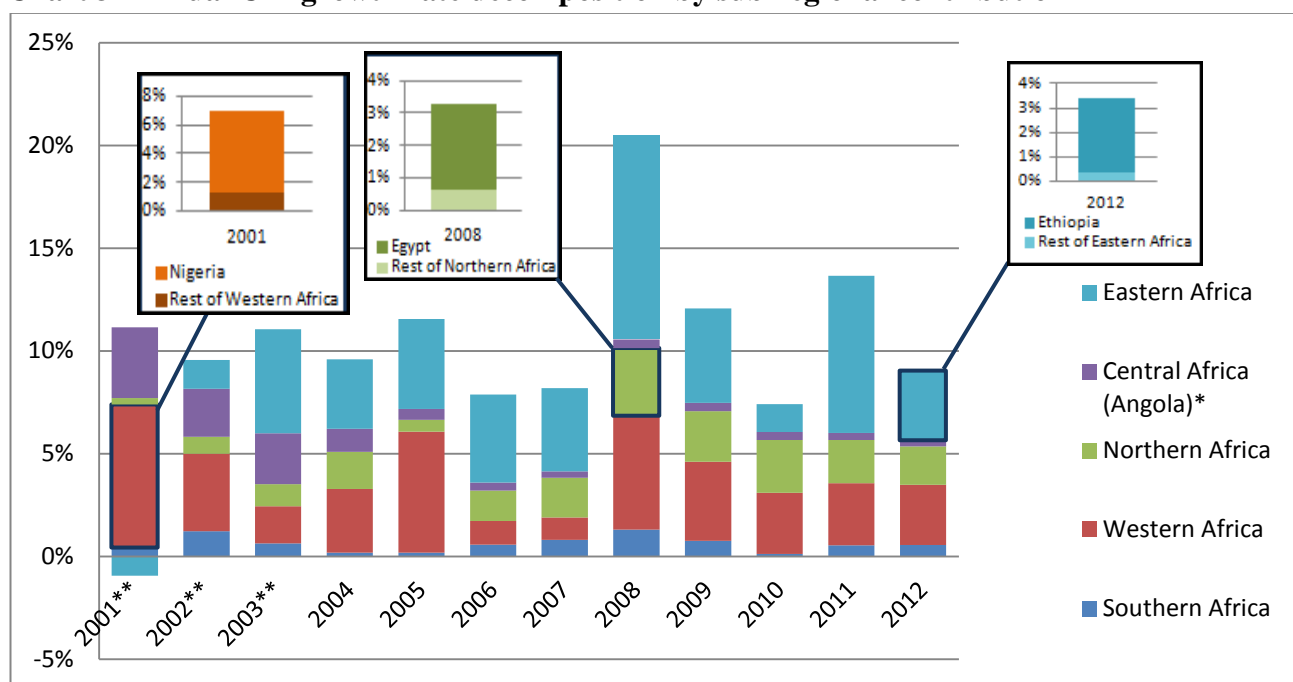
² From Malawi's official CPI release, currency depreciation coincided with all-item inflation above 35 percent in early 2013.

³ GIEWS, *Global Food Price Monitor*, March 2013 edition.

Eastern Africa and Western Africa are the main contributors to the increase in the annual African Food CPI, with an average contribution to the region's food price inflation of 35.5 percent and 32.4 percent, respectively, over the period 2001-2012. Only a few countries determine most of the sub-regional food inflation (Chart 3), for example: Ethiopia in Eastern Africa (55.2 percent 2001-2012 average contribution); Egypt in Northern Africa (71.0 percent 2001-2012 average contribution); Nigeria in Western Africa (73.9 percent 2001-2012 average contribution); and South Africa in Southern Africa (90.3 percent 2001-2012 average contribution).

A country's contribution to regional food price inflation reflects both its population weight and its national food inflation rate, the latter of which is measured by the annual change in food CPI. This means the same level of contribution could result from different combinations of food inflation rates and population weights. For example, in the case of South Africa, the average contribution of 90.3 percent to the food inflation in the Southern African region from 2001 to 2012 is associated with a 7.7 percent average annual food inflation rate, which is lower than the African average, and a population weight of 92.3 percent. Ethiopia, on the other hand, contributed an average of 55.2 percent to the Eastern African food price inflation, with a national food inflation rate of 16.6 percent and a population weight of 32.8 percent.

Chart 3 Annual CPI growth rate decomposition by sub-regional contribution



Source: ILO - Laborsta (data on country food CPIs), FAO Statistics Division (calculations)

* Central Africa actually corresponds to Angola, the only country of the sub-region for which 2013 monthly CPI statistics are available.
 ** From 2001 to 2003, annual food inflation rates in Africa resulting from the decomposition into contributions differ significantly from the inflation depicted by the annual African Food CPI. For example in 2001, annual food inflation resulting from the decomposition amounts to 10 percent against an annual African Food CPI of 8.6 percent. This is because high inflation rates in Central Africa during this period generated a bias in the approximation of growth rates from first differences of logarithms.

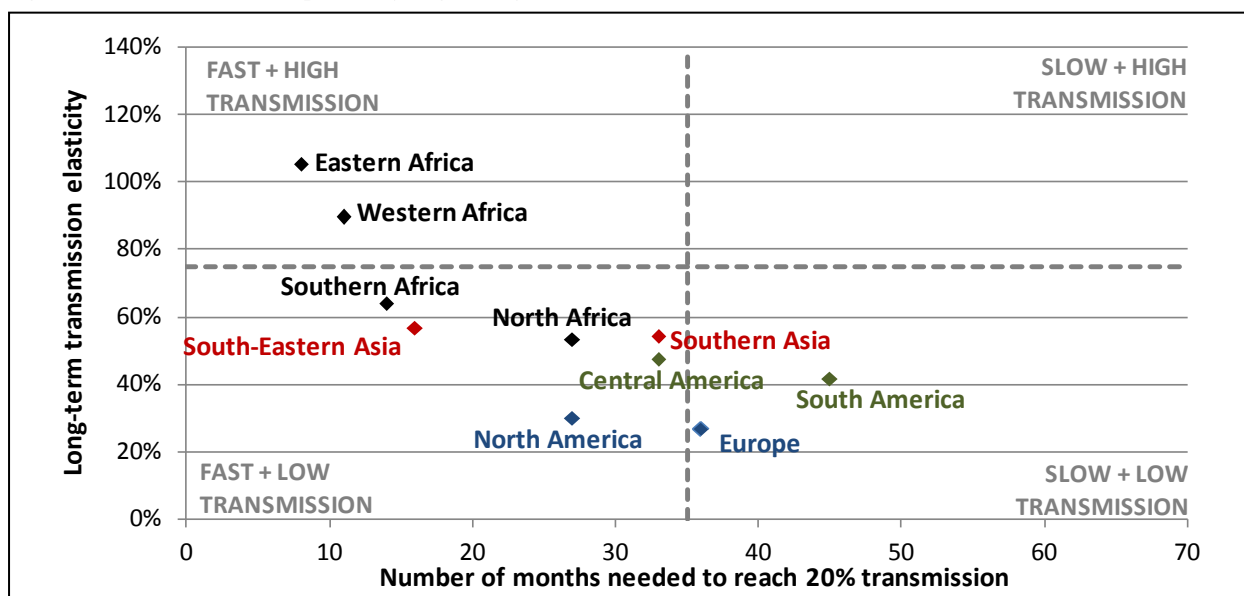
Box 1 Transmission of price volatility from international to domestic markets

In the previous release (*Global and Regional Food Consumer Price Inflation Monitoring, August 2013, Issue 1*), the apparent correlation between the FAO Food Price Index (FPI) and the Global Food CPI was illustrated by a simple graphical analysis. It suggested that the transmission process between international food prices (FPI) and the global food CPI was incomplete and lagged. These observations are confirmed by a first round of econometric estimations, which provide the empirical evidence on the extent and timing of the transmission process (see *Figure 1*) in each sub-regions.

The price pass-through tends to be the lowest in developed economies such as North America and Europe, which are characterized by extended food value-chains and a high share of processed products in households' food baskets: over the long-term, only 30% of price rises for primary products on international markets are passed on to domestic prices for final foodstuffs. Price transmission is somewhat higher in Latin America and Asia, reaching 50% on the long-run. Price changes on international markets are almost fully transmitted to domestic food prices in Eastern and Western Africa. For the former region, more than 10% of the shock is passed-on after 4 months, 20% after 8 months.

These results should be interpreted with caution, as they measure transmission between prices for a set of commodities traded on international markets and average food consumer prices for a set of countries pertaining to the same region. Transmission processes for specific commodities within a given country may differ from regional and commodity-aggregated averages. Furthermore, the underlying modeling of the transmission processes needs to be further refined to include relevant explanatory variables (food import dependency ratios, region-specific basket of commodities, etc.) and accommodate structural breaks in price co-movements. The results nevertheless confirm the intuition that price transmission is intrinsically linked to the characteristics of food value-chains and to the composition of food baskets. Some of the empirical results found in this study are also in line with other estimates drawn from slightly different modeling approaches.

Figure 1 - Cumulated response of regional food CPIs to a 1% shock in the FAO FPI and transmission length



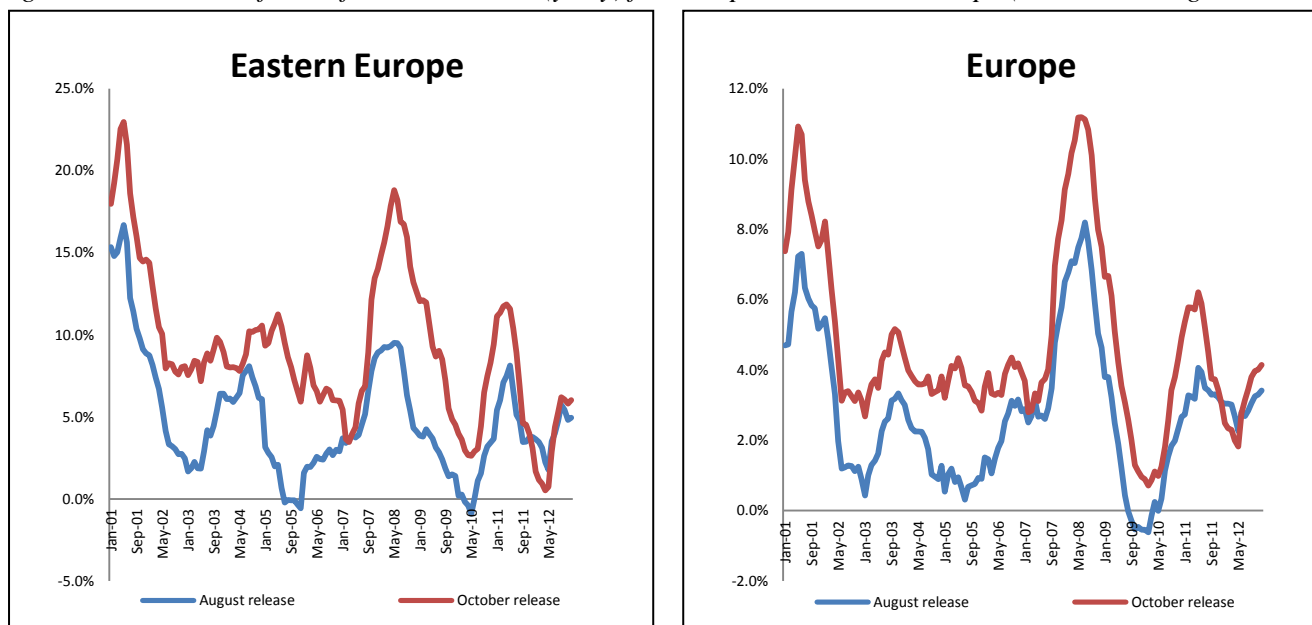
Source: F. Cachia (2013), *Regional Food Price Inflation Transmission*, paper presented at ICAS VI

Note: error correction models (ECM) are used to model the dynamics between regional Food CPIs and the FPI. Impulse Response Functions (IRFs) are then simulated on the basis of these models: the responses for each horizon (2 months, 4 months, etc.) correspond to the sum up to the given horizon of the IRFs which did not include 0 in their confidence interval. The long-term elasticity is the sum of all the IRFs statistically different than 0 at the 95% threshold.

Box 2 Data revisions

The data presented in this release includes statistics from the Russian Federation, which were excluded from the previous release. ILO food CPI monthly series up to May 2011 have been completed with series available in UN Monthly Bulletin of Statistics. The inclusion of Russia in the regional aggregations has entailed an upward revision of food inflation estimates for Eastern Europe, where Russia's population weight is 64.6 per cent (Figure 2). This also affected the estimate for Europe as a whole.

Figure 2 - Revision in food inflation estimates (y-o-y) for Europe and Eastern Europe (October vs August release)



Source: ILO - Laborsta (data on country food CPIs), FAO Statistics Division (calculations)

Definitions and Acknowledgements

FAO's Global and Regional Food Consumer Price Indices (CPI) measure food inflation for a group of countries at different geographical scales: sub-regional (e.g. South America), regional (e.g. Americas) and global (world, all countries). The Global Food CPI covers approximately 125 countries worldwide, representing around 80% of the countries and 90% of the world population.

The aggregation procedure is based on the use of population weights. Population weights may better reflect regional food inflation and its impacts on households, while using the Gross Domestic Product (GDP) or any other measure of national income may better reflect the impact on the economy as a whole. Using GDP would also mean giving a higher weight to countries less exposed to food insecurity, because households in countries with higher GDP tend to be richer, spend a lower proportion of their income on food and benefit from an economic environment characterized by lower and less volatile consumer price inflation.

The source of data for the country CPIs is the International Labour Organization (ILO). We gratefully acknowledge the Statistics Division of the ILO for their methodological and technical guidance on the compilation of global and regional food inflation indices. Please also note that the ILO publishes twice a year world aggregates of food and all items CPI, based on GDP weights, as part of the Global Trends in the Labour Market (<http://laborsta.ilo.org/sti/>).

Because of significant conceptual and methodological differences involved in the compilation of national CPIs by countries around the world, any global and regional CPI aggregates should be used with caution.

For a more detailed description of the indices, please consult the technical note on the subject: *Regional Aggregations of Food Consumer Price Indices*, Statistics Division, FAO, August 2013

Next release

Country Consumer Food Price Indices are updated every month on FAOSTAT. Regional and Global indices are updated every quarter. The next release presenting global and regional trends will be on January 15th 2014.

Contact information

For more information, or to enquire about the concepts, methods or data quality of the CPIs, contact the Price Statistics Team of FAO's Statistics Division (Price-Statistics@fao.org / +00 39 0657052553).