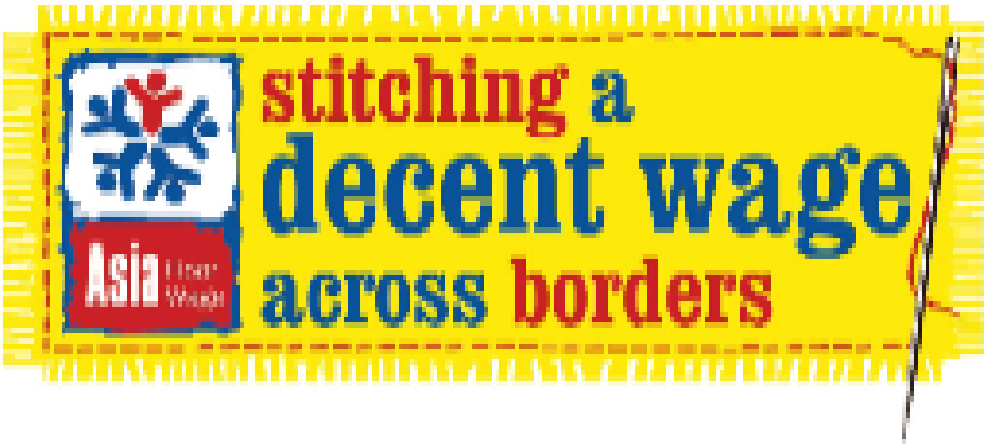

Calculating the Asia Floor Wage

August 2015

I. Introduction

The report "*Stitching a Decent Wage Across Borders*" explains in detail how a minimum living wage benchmark is defined and calculated for several Asian countries.

The first year that the Asia Floor Wage (AFW) formula was released was 2009. The AFW was calculated at 475 PPP$ as of January 1, 2009 based on 2008 data. 2009 was since then called the "**AFW Base Year"**.

Naturally, this benchmark figure needs to be regularly adjusted to account for the price rise in the cost of living (that is, inflation). The AFW is adjusted every year using the Consumer Price Indexes (CPI) from the various countries (Annexure 1).[1]

Every 4-5 years, the AFW, instead of being revised by using CPI, is calculated afresh in countries using real Food Basket data, so as to re-ground the figure using real costs once again. Market prices used are based on working class markets near the capital city area. *The year during which AFW Food Basket is calculated*

[1] PPP calculation looks at relative inflation between countries whereas AFW requires inflation to be calculated relative to the base year.

Asia Floor Wage Alliance – International Secretariat
c/o Society for Labour & Development, C-23, 1st Floor, Hauz Khas, New Delhi 110016, India.
Ph: 011-26525806, email: asiafloorwage@gmail.com
www.asiafloorwage.org

afresh, that year becomes ***the new AFW Base Year***. (Annexure 2)

In recent years Asia has seen a significant rise in food costs and therefore recent food basket research has been a jump in the costs of this basic food basket. The latest AFW figures show the gap between the minimum wage in many Asian garment producing countries and the AFW figure increasing, as workers continue to struggle to pay for their most basic needs.

II. Calculation of AFW based on the Food Basket

Step 1: Each country calculates the Food Basket using an "**AFW Food Basket Template."** The Food Basket is calculated on the basis of 3000 calories being consumed by one adult per day. The daily cost is then multiplied by 30 to get the monthly food cost; and then again by 3 units of consumption to arrive at Food Cost for a family for a month.

Step 2: Calculate the Non Food Expenditure. As AFW calculations maintain a 50%-50% weightage between food and non-food items, the food expenditure amount (for each specific country) can be considered to also be the amount that workers spend on non- food items.

Step 3: Add up the food and non-food expenditure to estimate the AFW for each country.

Step 4: These country-wise figures are then converted to PPP$ using the PPP Conversion Factors decided by the World Bank. This results in a range of country-wise PPP$ figures.

Step 5: In order to come up with a regional AFW PPP$ figure, the unions in AFWA arrive at a consensus on a specific PPP$ figure from the range, which could also be a simple average of the country-wise AFW PPP$ figures. This becomes the official AFW figure in PPP$.

Step 6: Convert the common AFW Figure in PPP$ back to local currencies to get the AFW for specific countries.

III. Annual Revision using Consumer Price Index (CPI)

Step 1-Base Year Conversion: As said above, 2009 was the first year of AFW setting with Food Basket calculation and it was the **AFW Base Year** till 2013 when the second round of Food Basket research was conducted. Now 2013 is the AFW Base Year till the next round of Food Basket research is done.

A country's CPI, as calculated by the government, may have a different base year. The first step involves converting the base year used in CPI calculation (country specific) to the year 2013 (as year 2013 is now the base year for AFW calculations). This step results in a "**base conversion factor**" which can be used to arrive at the CPI for a particular year, for a specific country, using the AFW Base Year.

Step 2-Weightage Conversion: In AFW, Food and Non-Food items each constitute 50% of AFW. In other words, AFW weightage for food is 50% and non-food is 50%. However, in a country's government calculated CPI, the weightage of food and non-food may be different (e.g. 40-60, 70-30). This step converts the weights from the existing weightage in the index value (say 40% for food and 60% for non food items) to the AFW weightage, that is, 50% for food and 50% for non-food, for the same year, for that specific country. **This is CPI Index for $\mathbf{AFWCPI_{COUNTRY}}$ for the specific country, with Base Year as 2013 and Food and Non-Food weightage as 50-50.**

Step 3-Establish Regional CPI Index for AFW from the country-specific CPI Index for AFW: The average of country specific $\mathbf{AFWCPI_{COUNTRY}}$ is taken to arrive at $\mathbf{AFWCPI_{Asia}}$.

Step 4: AFW for Current Year is calculated
AFW (Current Year) = AFW (Base Year) * ($\mathbf{AFWCPI_{Asia}}$ /100)

***Note**: The World Bank publishes new PPP$ conversion rates for different countries periodically. At times, it retroactively revises PPP$ conversion rates in previous years, based on new data. The AFWA has had to therefore contend with these revisions, even when made retroactively.*

So, for example, AFW in 2013 was calculated to be 725 PPP$ using the latest PPP$ conversion factors available at that time – latest being the year 2011. In 2015, the World Bank has released PPP$ conversion factors using a new calculation methodology; in the process, it has also retrospectively revised the PPP$ conversion factors in 2011 in addition to releasing PPP$ conversion factors for 2013.

As we revise AFW in 2015 based on AFW in 2013, we need to be consistent in our use of PPP$ conversion factors. Since conversion factors are now available for 2013, we have used 2013 conversion factors to convert AFW figures in local currencies in 2013 to AFW in PPP$.

As a result, the PPP$ figure for the AFW in 2013 is now 965 PPP$. The AFW 2015, using the CPI methodology, is calculated relative to 965 PPP$.

Annexure 1
What is CPI and how is it calculated?

Consumer Price Index (CPI) is the most widely used and accepted norm for measuring inflation. CPI is a comparison of prices over two periods of time. There are various ways of calculating it. One of the most common method is:

1. Fix a bundle of commodities, and measure the amount of those commodities (this is called the weight) to be consumed by an average person.

   Let us assume that there are only two consumable things, viz. food and clothes. A person Ms. Y, in the year 2010, used to consume 10 KG of rice (the only food commodity) and 10 units of cloth (the only non food commodity). The price of food and cloth are 50 and 75 per unit respectively. So the expenditure of Ms. Y in 2010 was (10*50)+(10*75)=1250
2. In the year 2013 the price of food and cloth has become 60 and 80 respectively. So the expenditure of Ms. Y in 2013 is (10*60)+(10*80)=1400
3. In 2014, prices again increase. This time they become 70 and 90 respectively. So the expenditure of Ms. Y in 2014 becomes (10*70)+(10*90)=1600
4. Now if we take 2010 as the **base year** then that means we are considering this year as the benchmark year, and others years' price ratio will be measured in comparison to the base year. In that case, the CPI of 2010 is defined as 100. So the CPI of 2013, in comparison to 2010 becomes (1400/1250)*100= 112
5. And the same of 2014 with 2010 as base year becomes (1600/1250)*100= 128.

Annexure 2
How is Base Year of CPI changed?

1. Continuing from Annexure 1, suppose we want to compare the prices of years vis-à-vis 2013 instead of 2010. So our new base year become 2013. The CPI of 2013 with 2013 as base is now (1400/1400)*100 = 100
2. Similarly the CPI of 2014 will also change as we have shifted the base year from 2010 to 2013. The new CPI of 2014 with 2013 as base year is (1600/1400)*100=114

This operation is called base conversion in calculation of CPI. Lets discuss a simpler way of doing this exercise:

(i) The CPI of 2013 (with 2010 as base) is 112.

(ii) When divided by 100, we get 1.12.

(iii) Now, the CPIs (with base 2010) of subsequent years can be divided by this factor 1.12 in order to get the CPIs of those years, with the base of 2013.