

Nutrition Situation in Region III (Central Luzon)



The Double Burden of Malnutrition Region III (Central Luzon)

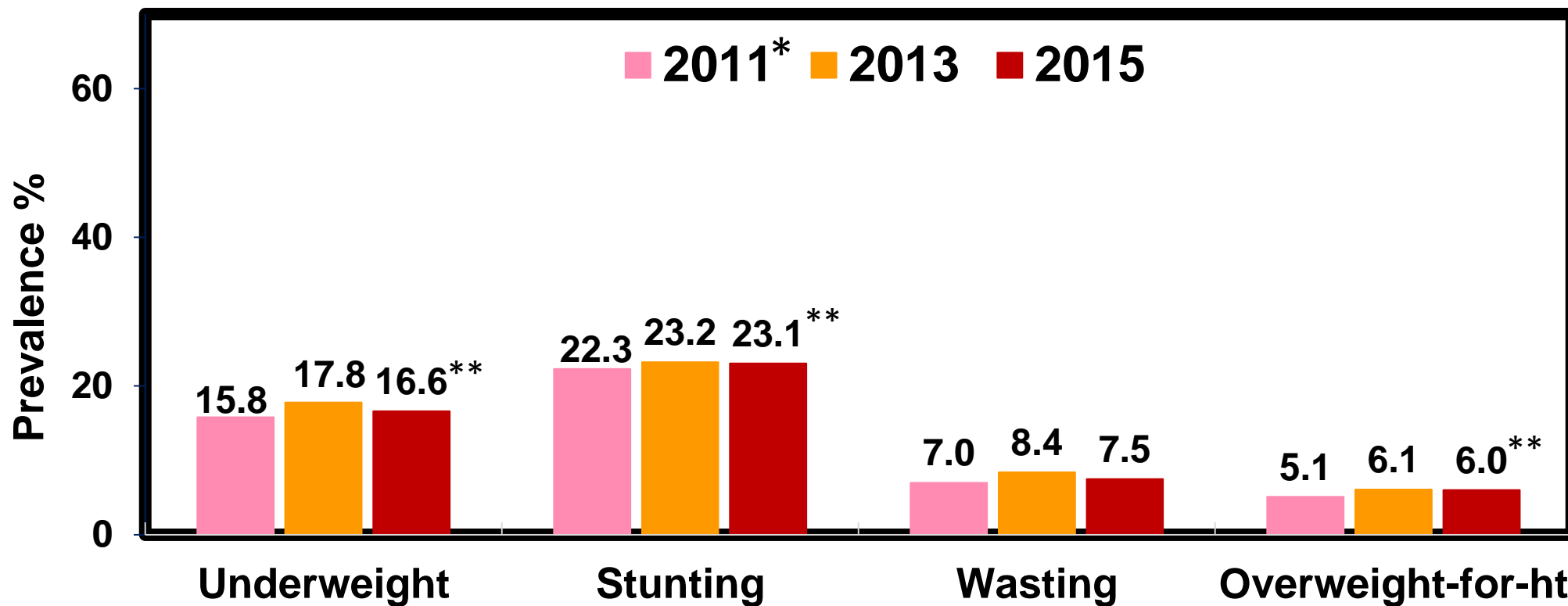
2015 Updating of the Nutritional Status of Filipino Children and Other Population Groups



Department of Science and Technology
Food and Nutrition Research Institute



Prevalence of malnourished among children less than 5 years old: Central Luzon, 2011, 2013, 2015



Phil Ave. 2015: 21.5%

33.4%

7.1%

3.9%

*0-60 months old children

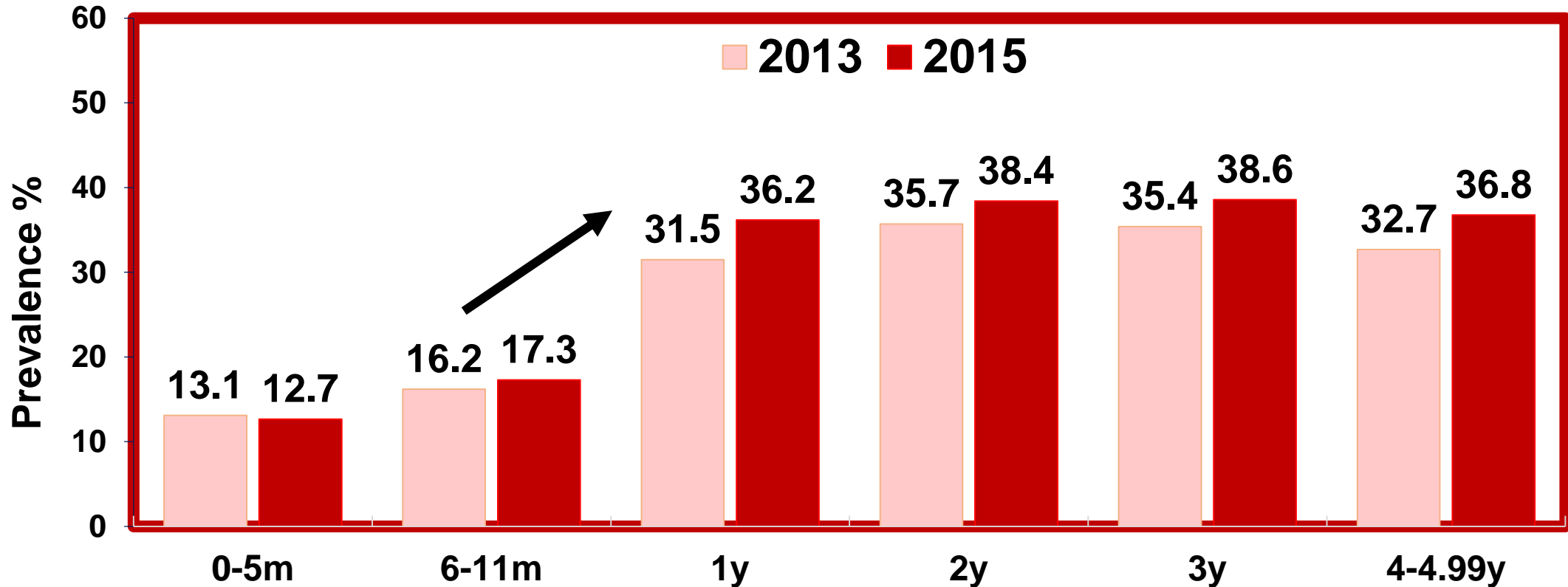
**significantly higher/ lower than Philippine average



Department of Science and Technology
Food and Nutrition Research Institute



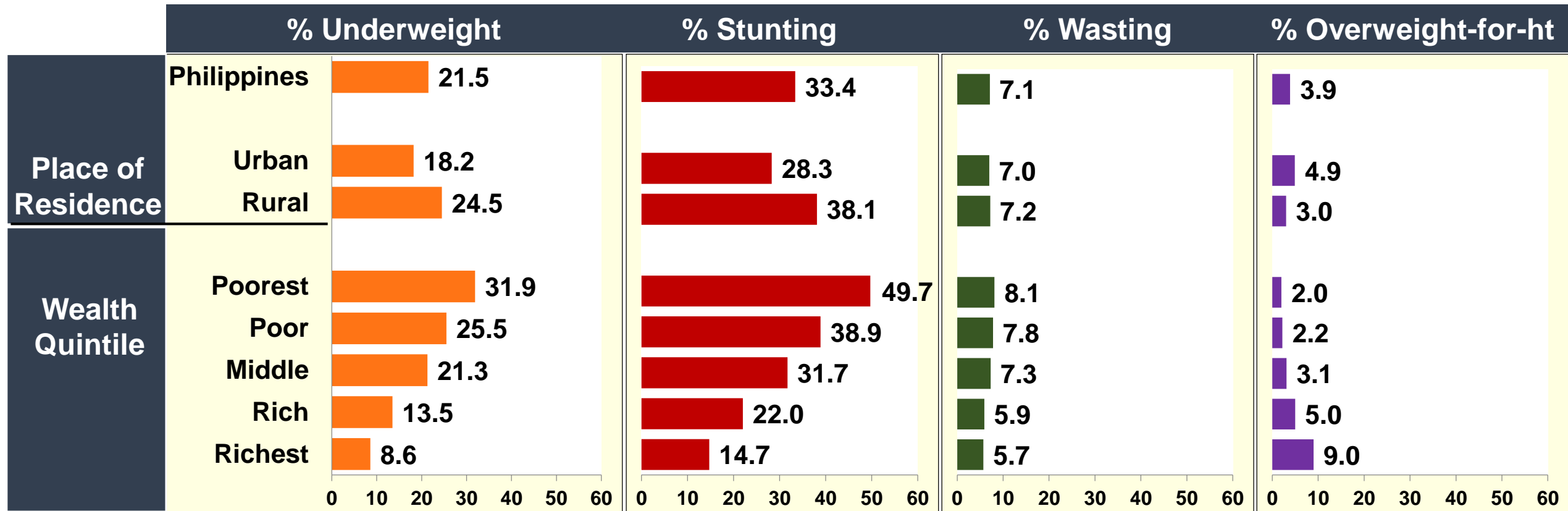
Prevalence of **stunting** among children less than 5 years old by **age group**: Philippines, 2013 vs 2015



Department of Science and Technology
Food and Nutrition Research Institute



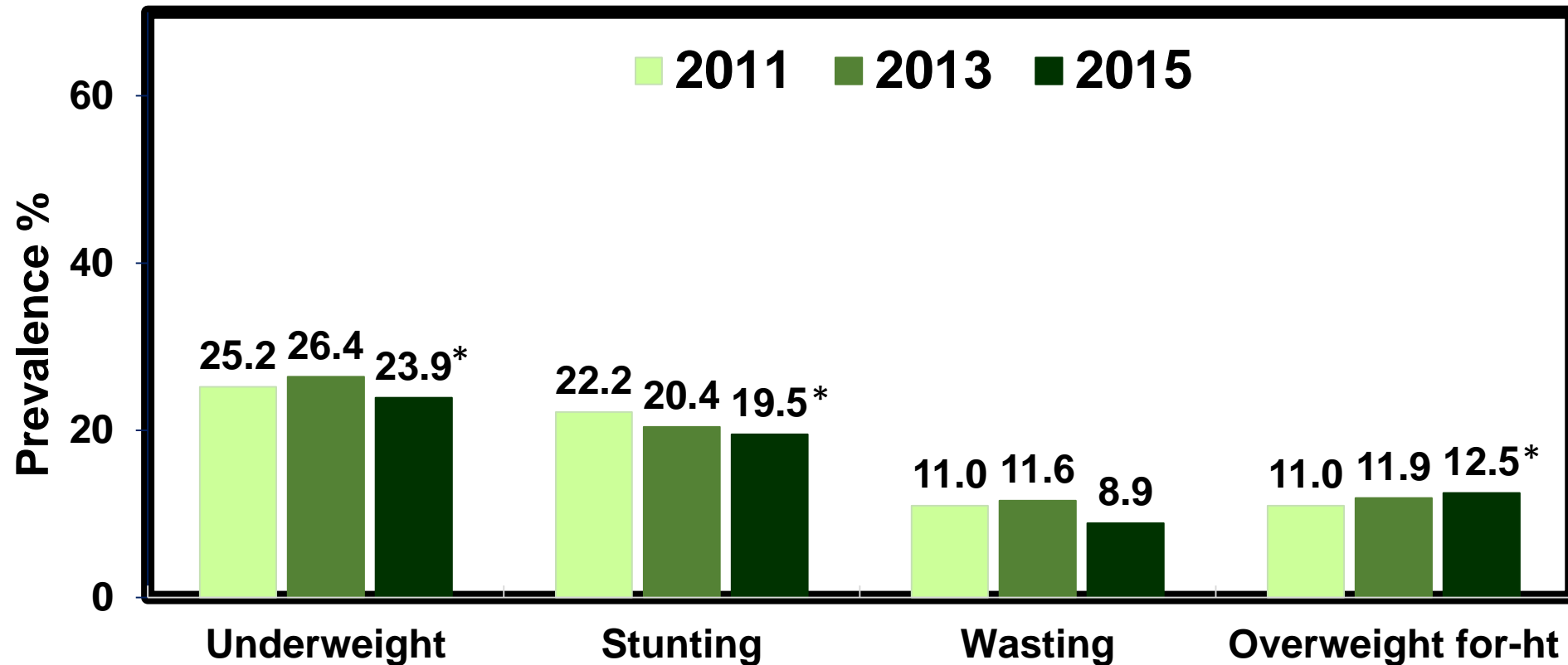
Prevalence of **malnutrition** among children less than 5 years old by **place of residence** and **wealth quintile**: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Prevalence of **malnourished** among children, 5-10 years old: Central Luzon, 2011, 2013, 2015



Phil Ave. 2015:

31.2%

31.1%

8.4%

8.6%

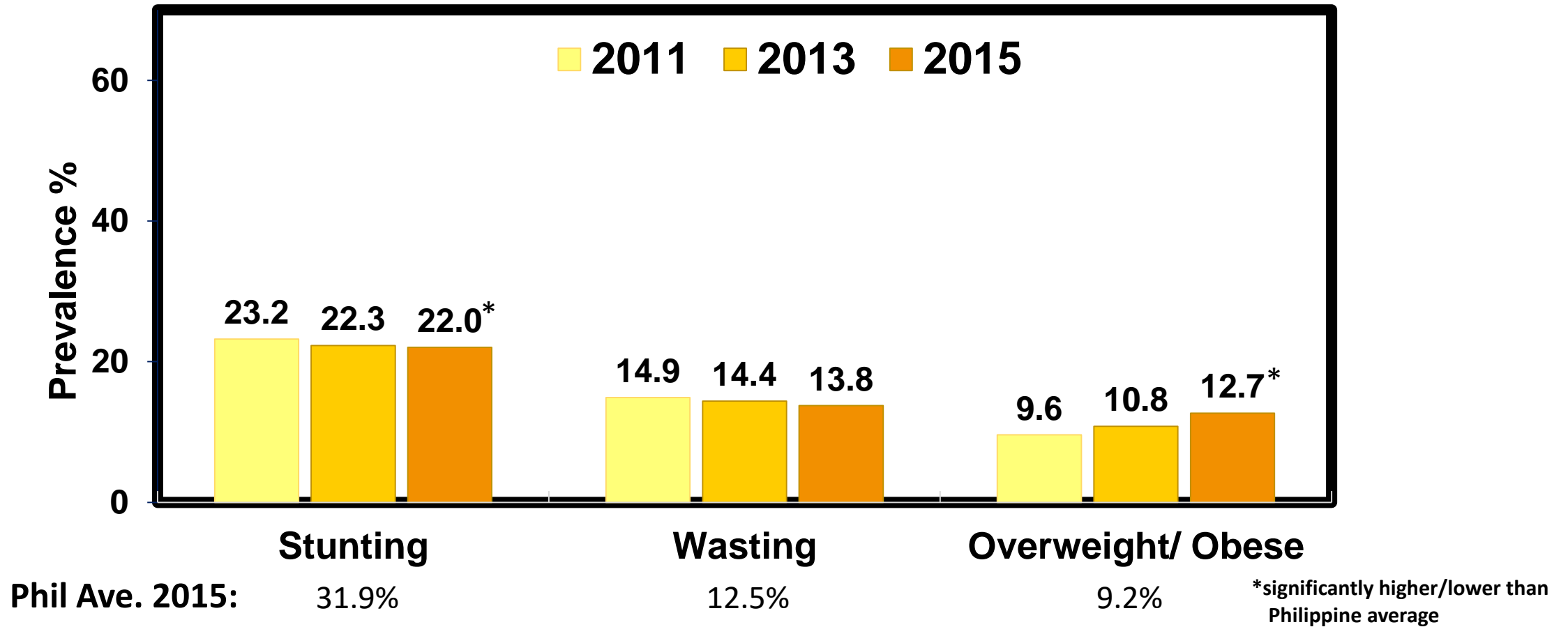
*significantly higher/ lower than Philippine average



Department of Science and Technology
Food and Nutrition Research Institute



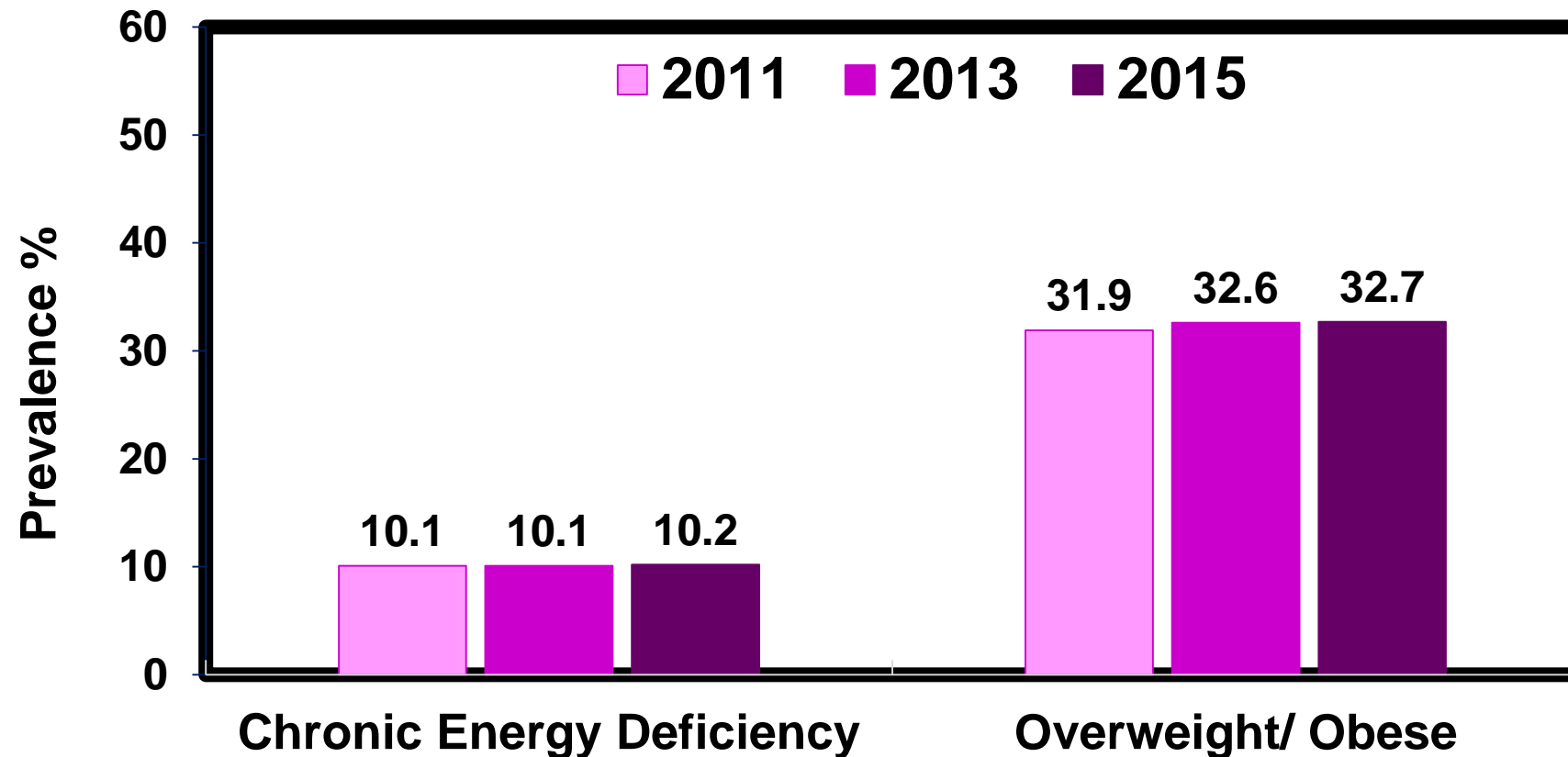
Prevalence of **malnourished** among children, 10-19 years old: Central Luzon, 2011, 2013, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Prevalence of **malnourished** among adults, ≥ 20 years old based on BMI: Central Luzon, 2011, 2013, 2015



Phil Ave. 2015:

10.3%

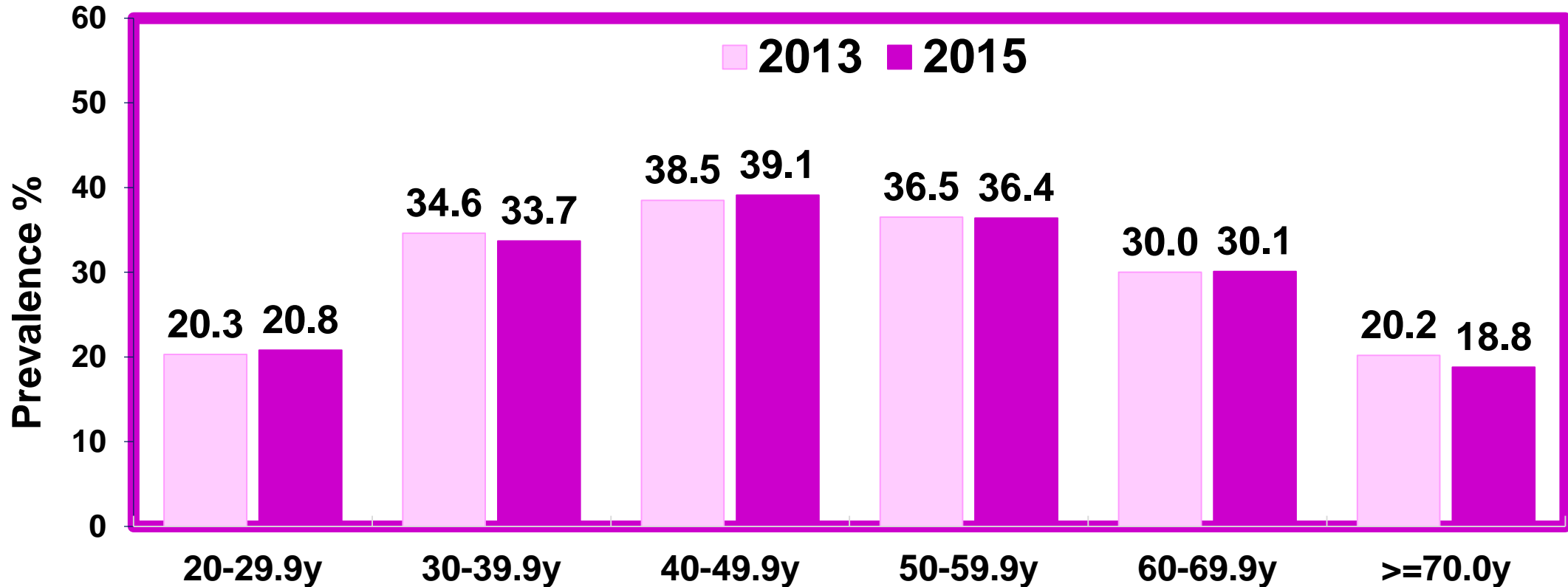
31.1%



Department of Science and Technology
Food and Nutrition Research Institute



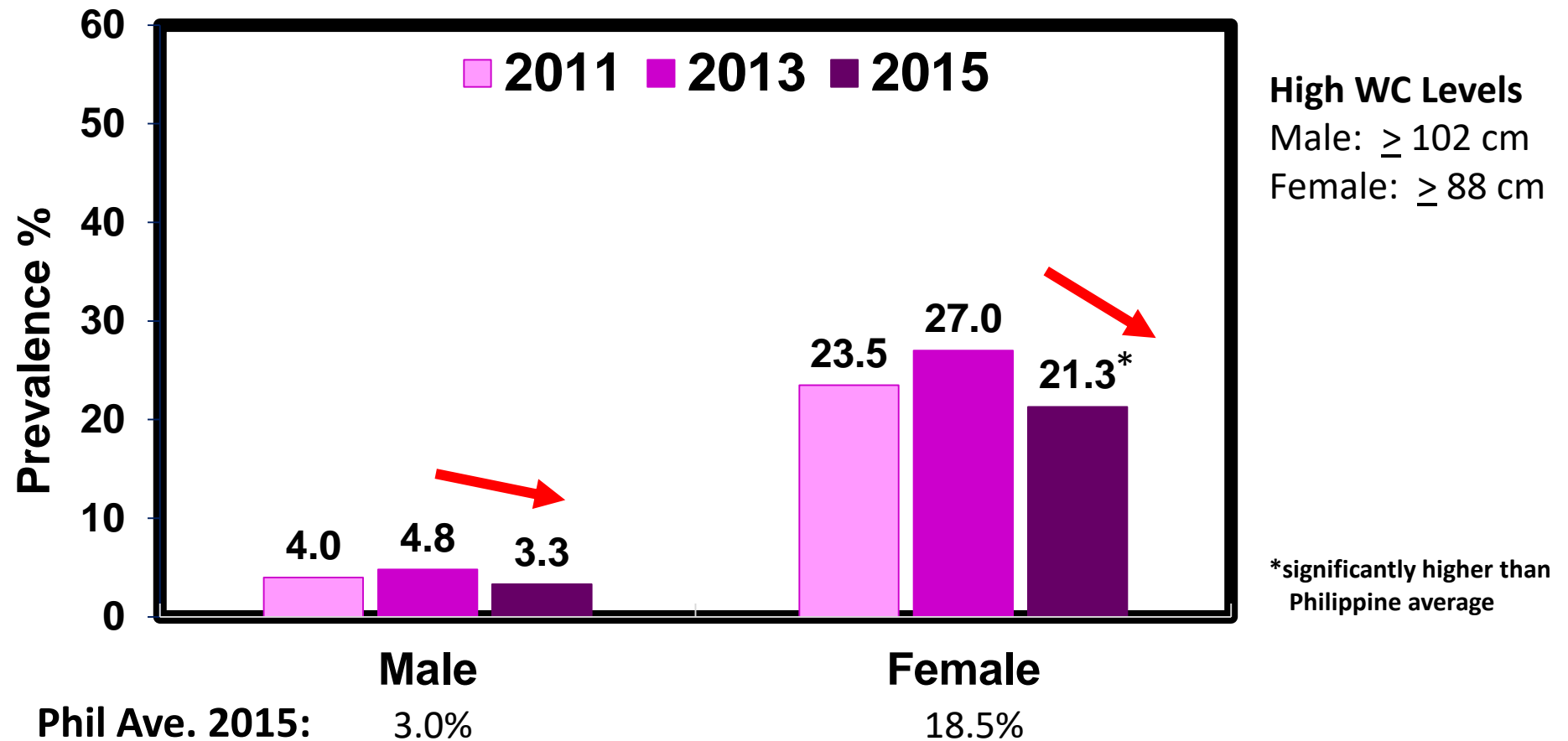
Prevalence of **overweight and obese** among adults, ≥ 20 years old based on BMI by **age group**: Philippines, 2013 vs 2015



Department of Science and Technology
Food and Nutrition Research Institute



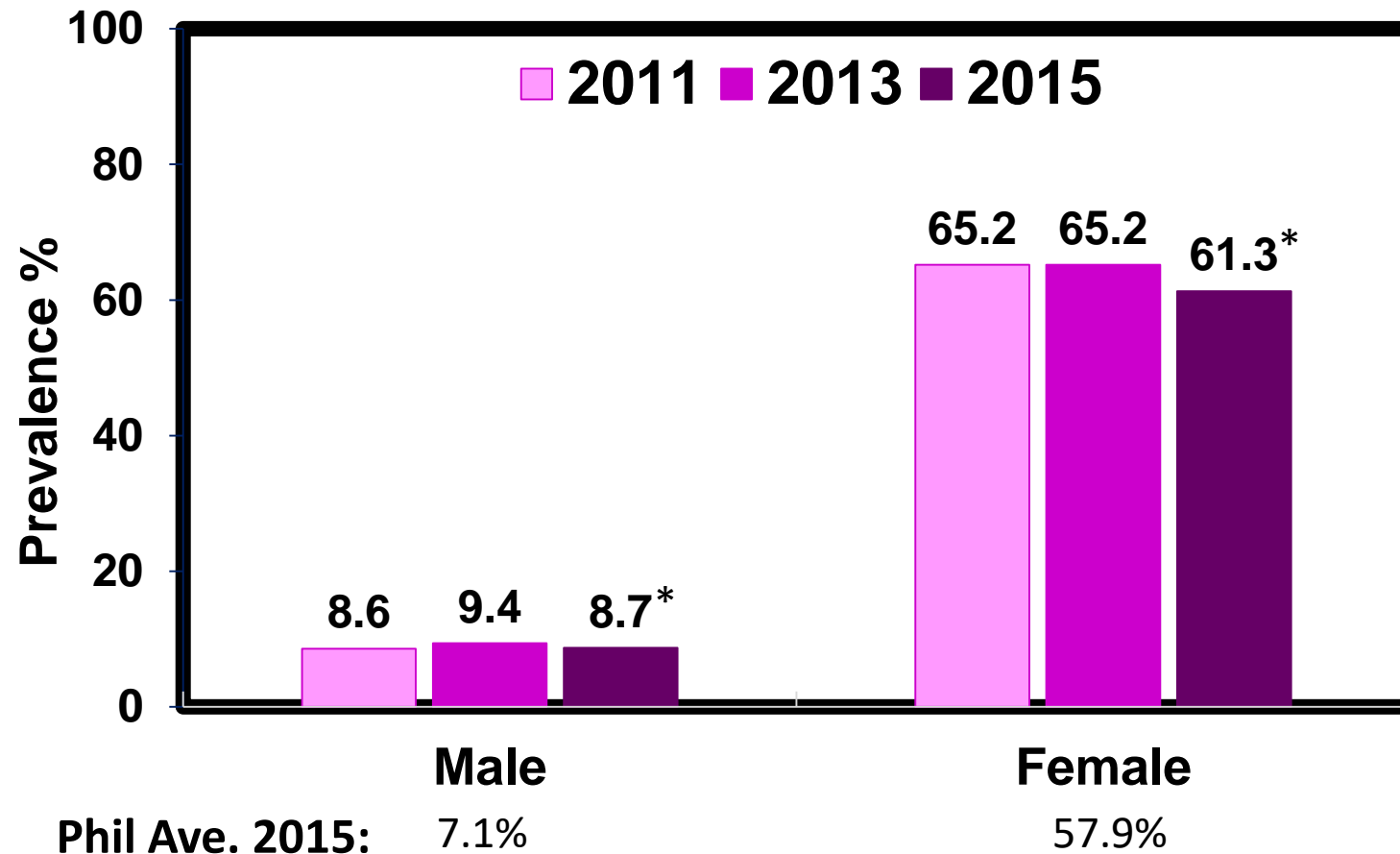
Prevalence of **high waist circumference** among adults, ≥ 20 years old by **sex**: Central Luzon, 2011, 2013, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Prevalence of **high waist-hip ratio** among adults, ≥ 20 years old by **sex**: Central Luzon, 2011, 2013, 2015



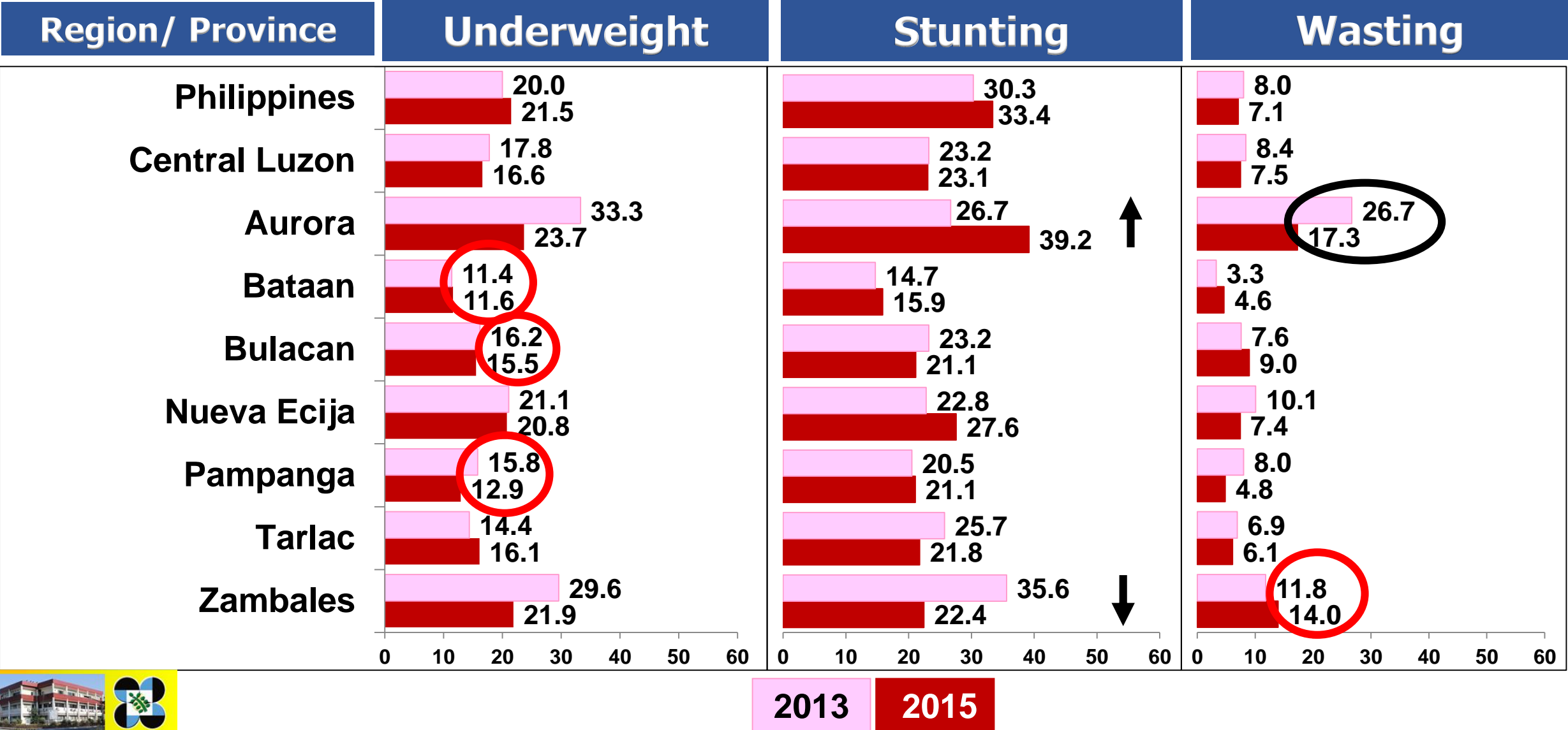
High WHR Levels
Male: ≥ 1.00
Female: ≥ 0.85



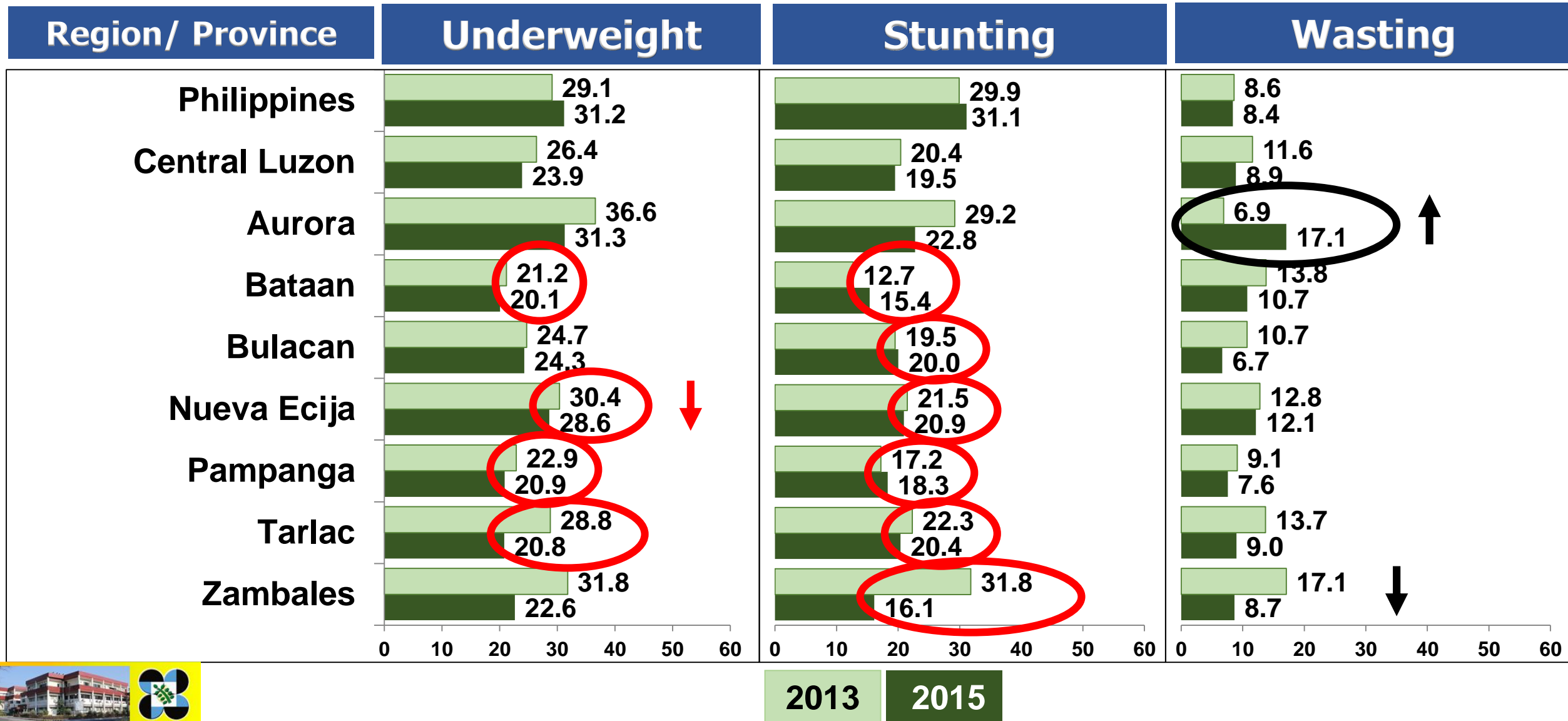
Department of Science and Technology
Food and Nutrition Research Institute



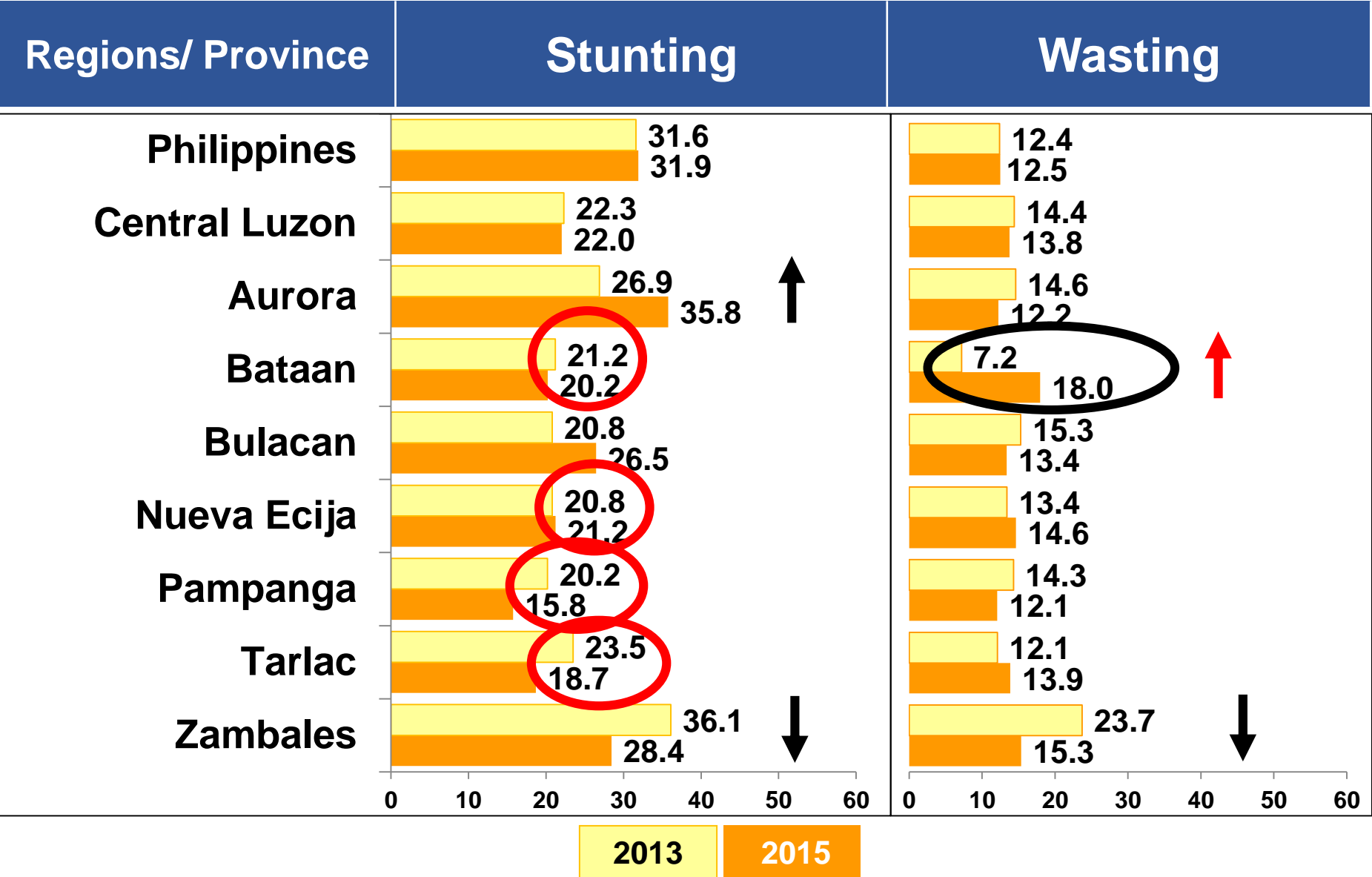
Prevalence of **undernutrition** among children, less than 5 years old by **province**: Philippines and Central Luzon, 2013 vs 2015



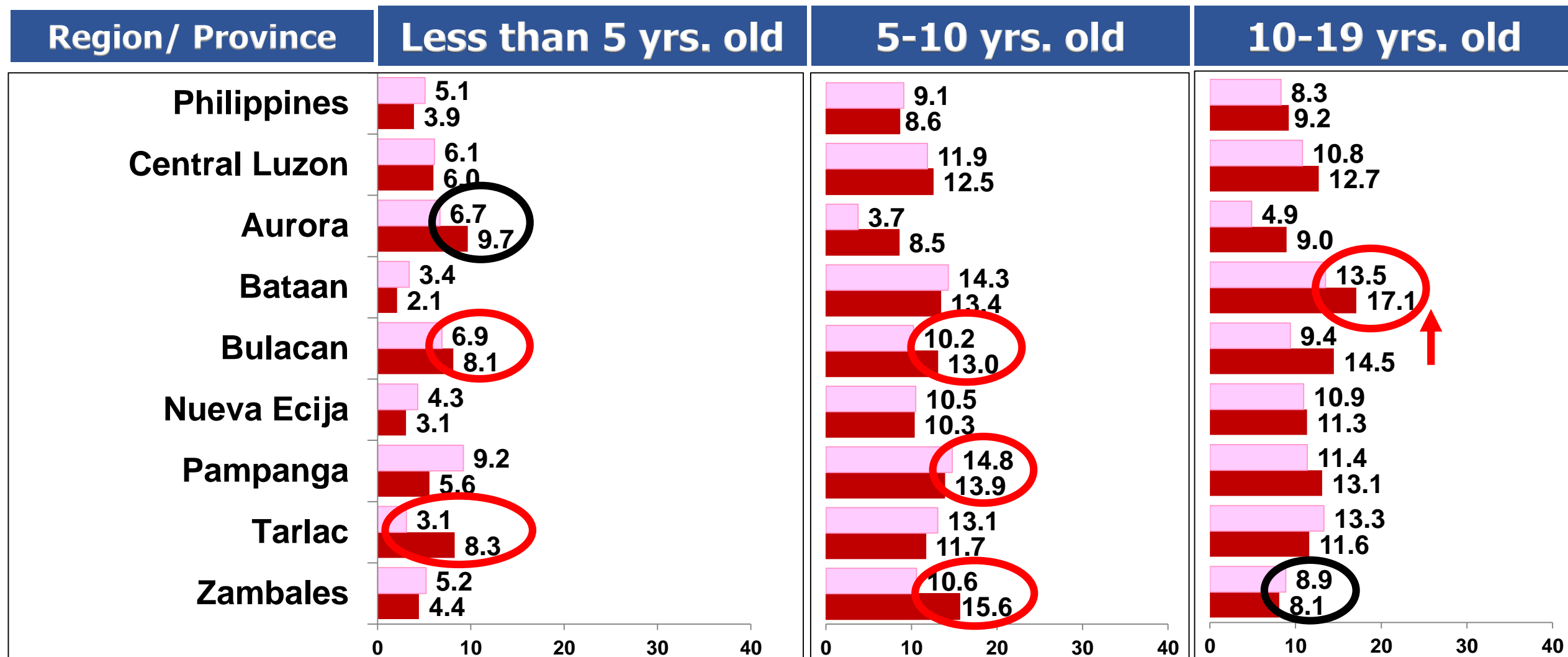
Prevalence of **undernutrition** among children, 5-10 years old by **province**: Philippines and Central Luzon, 2013 vs 2015



Prevalence of **undernutrition** among children, 10-19 years old by **province**: Philippines and Central Luzon, 2013 vs 2015



Prevalence of overweight and obese among children, 0-19 years old by province: Philippines and Central Luzon, 2013 vs 2015

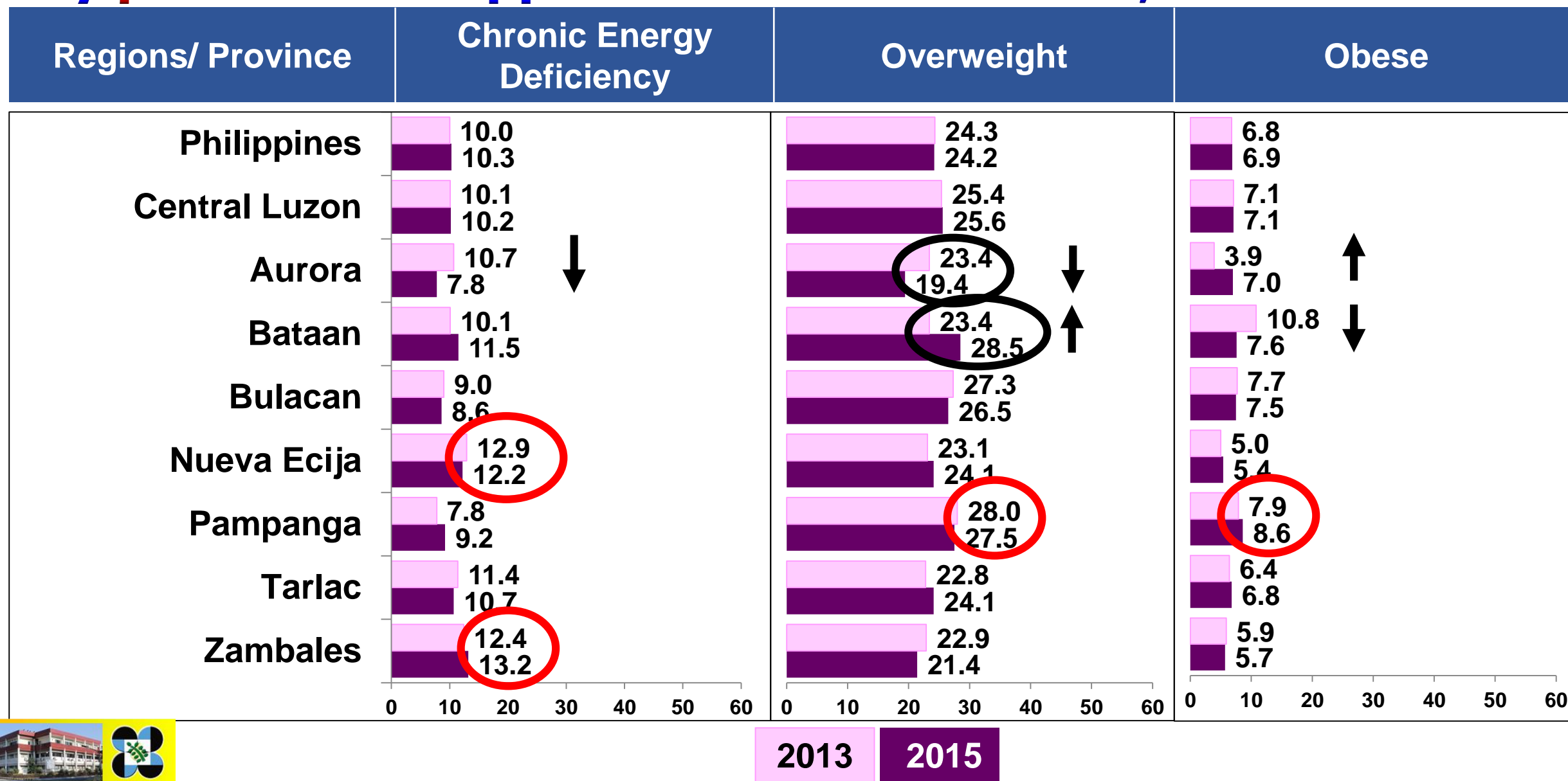


2013

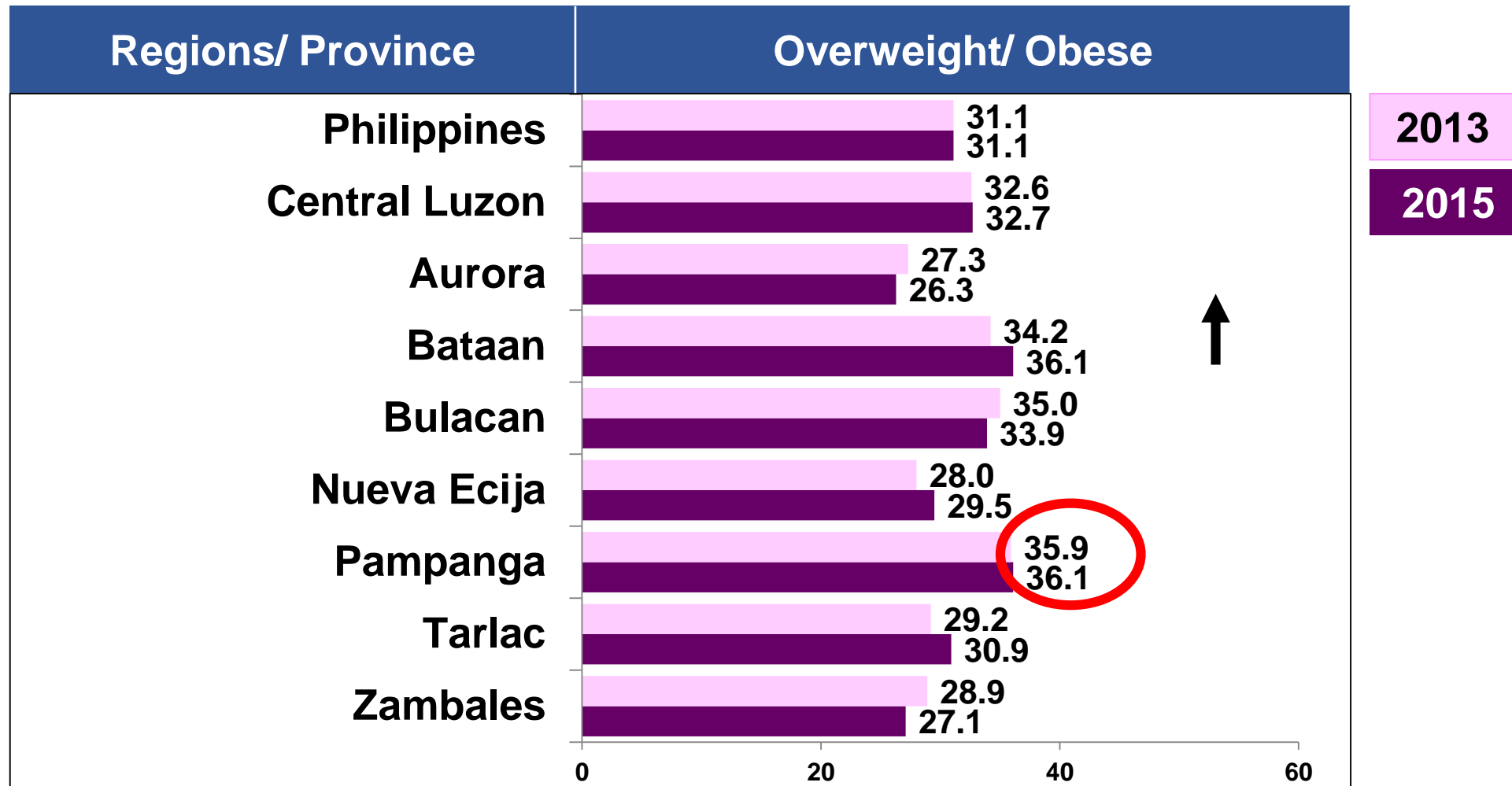
2015



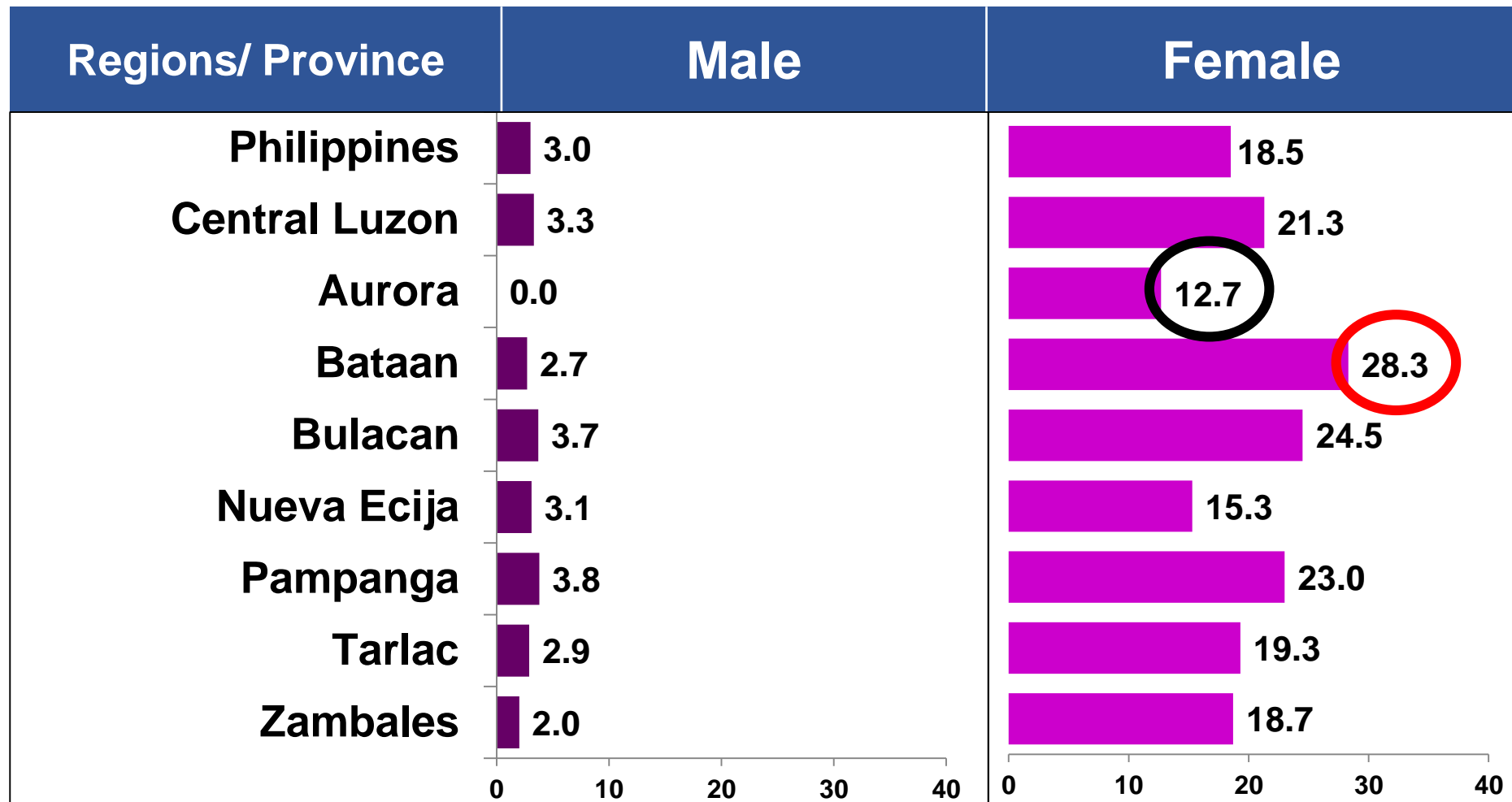
Prevalence of **malnutrition** among adults, ≥ 20 years old by **province**: Philippines and Central Luzon, 2013 vs 2015



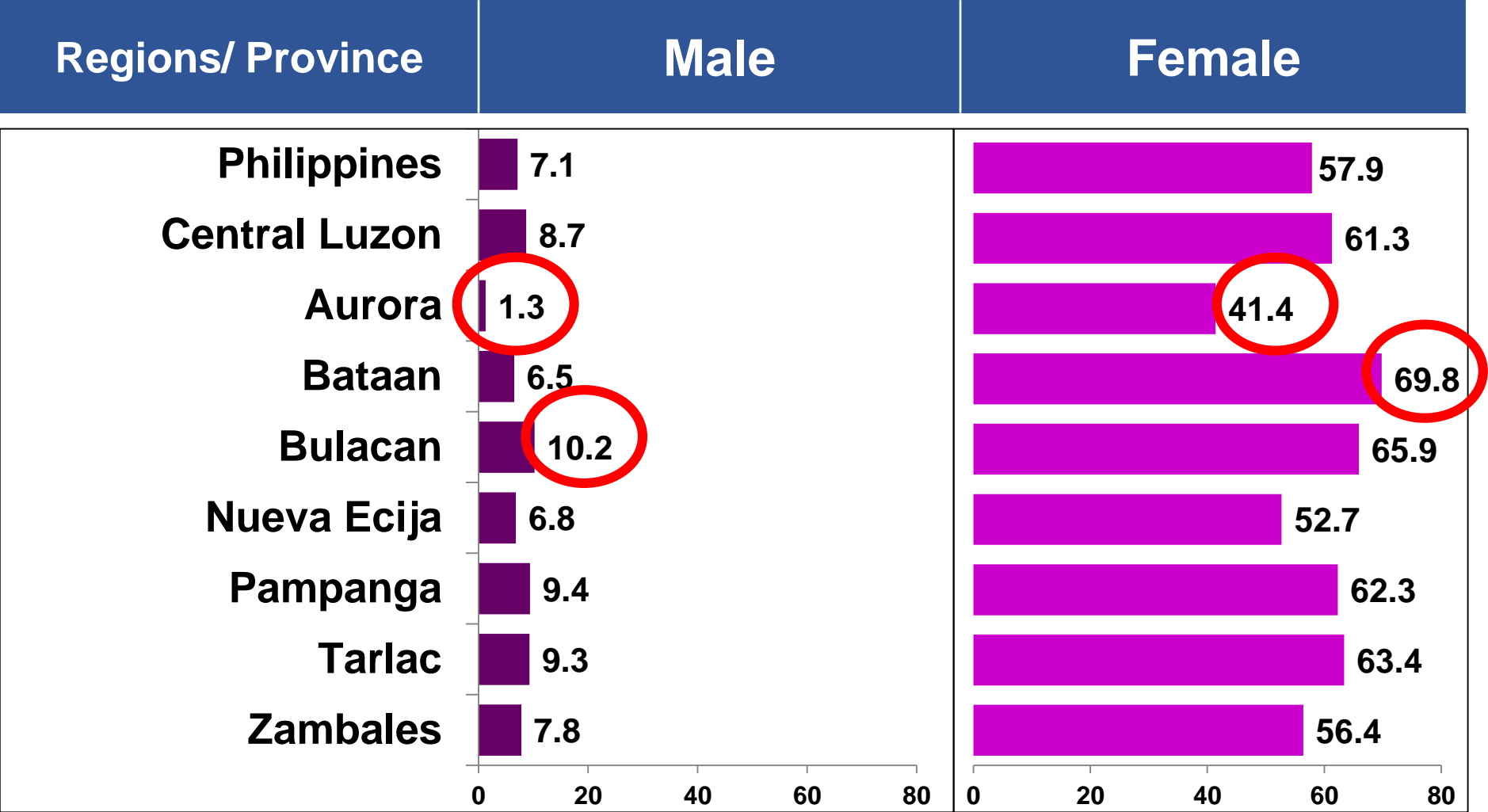
Prevalence of **overweight** and **obese** among adults, ≥ 20 years old by **province**: Philippines and Central Luzon, 2013 vs 2015



Prevalence of **high waist circumference** among adults, ≥ 20 years old by **sex** and by **province**: Philippines and Central Luzon, 2015

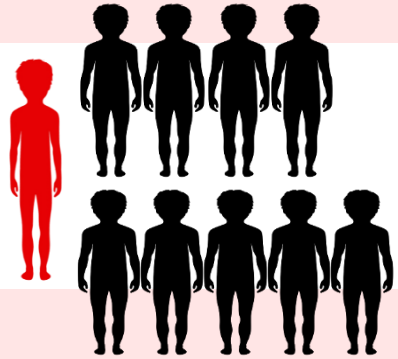


Prevalence of **high waist-hip ratio** among adults, ≥ 20 years old
by **sex** and by **province** : Philippines and Central Luzon, 2015



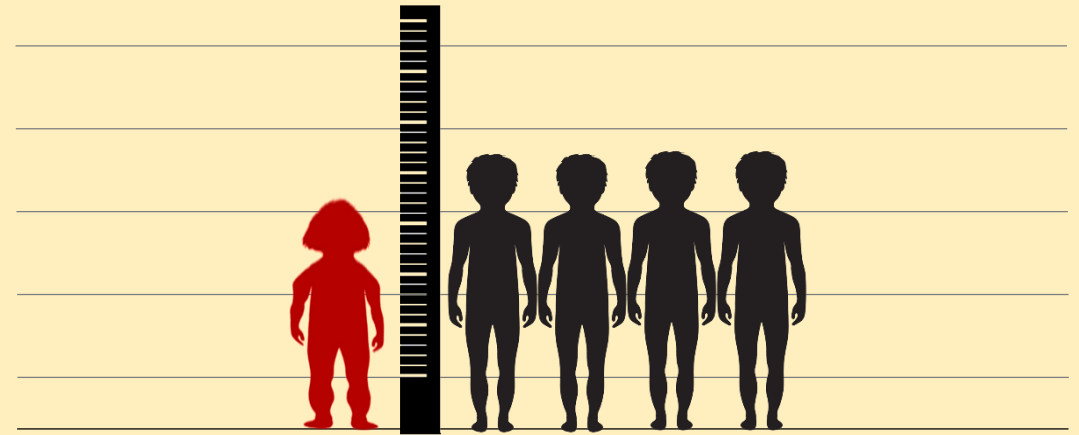
Summary

Children, Less than 5 years old



1 out of 10

16.6% are underweight



1 out of 5

23.1% are stunted



7 out of 100

7.5% are wasted or thin and considered to be a public health problem



6 out of 100

6.0% overweight for their height



Department of Science and Technology
Food and Nutrition Research Institute



Summary

Children, Less than 5 years old

- Underweight prevalence generally decreased except for Bataan and Tarlac
- Stunting prevalence generally increased except for Bulacan, Tarlac and Zambales
- Wasting generally decreased except for Bataan, Bulacan and Zambales (but not significant)
- Overweight generally decreased except for Aurora, Bulacan and Tarlac

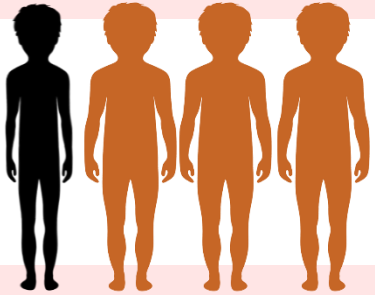


Department of Science and Technology
Food and Nutrition Research Institute



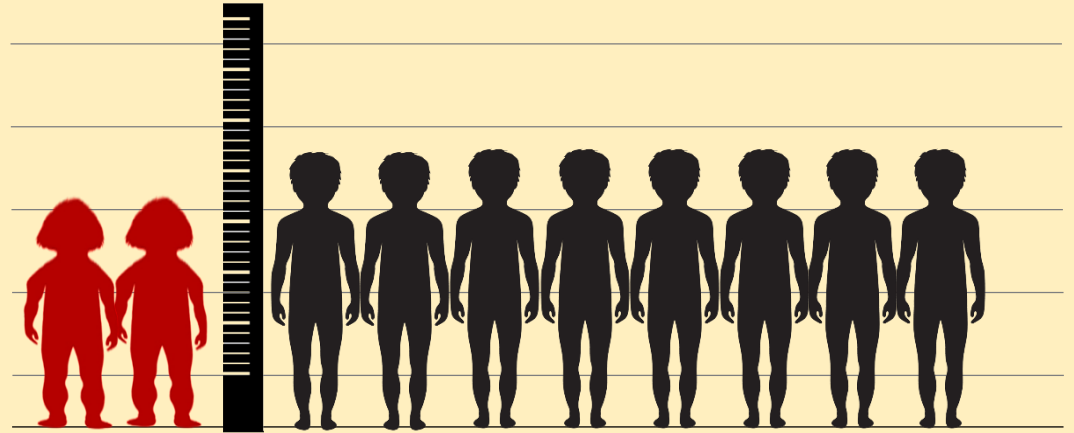
Summary

School Children, 5-10 years old



1 out of 4

23.9% are underweight



2 out of 10

19.5% are stunted



9 out of 100

8.9% are wasted or thin and considered to be a public health problem



1 out of 10

12.5 % overweight for their height



Department of Science and Technology
Food and Nutrition Research Institute



Summary

School Children, 5-10 years old

- Generally, underweight prevalence decreased for all provinces
- Stunting prevalence generally decreased except for Bataan, Bulacan, and Pampanga
- Wasting generally decreased except for Aurora
- Overweight generally decreased except for Aurora, Bulacan and Zambales



Department of Science and Technology
Food and Nutrition Research Institute

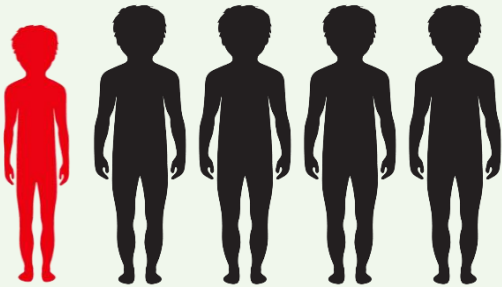


Summary

Pre-adolescent and Older Children, 10-19 years old

1 out of 5

22.0% are stunted



1 out of 10

13.8% are wasted or thin



1 out of 10

12.7% are overweight and obese



Department of Science and Technology
Food and Nutrition Research Institute



Summary

Pre-adolescent and Older Children, 10-19 years old

- Stunting prevalence decreased among except in Aurora and Bulacan
- Wasting generally decreased among provinces except in Bataan, Nueva Ecija and Tarlac
- Overweight and Obesity prevalence increased among provinces except in Tarlac and Zambales



Department of Science and Technology
Food and Nutrition Research Institute

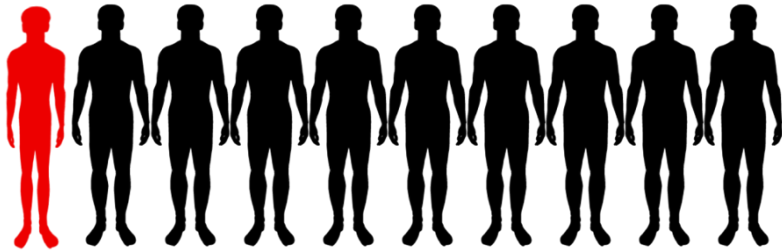


Summary

Adults, 20 years old and over

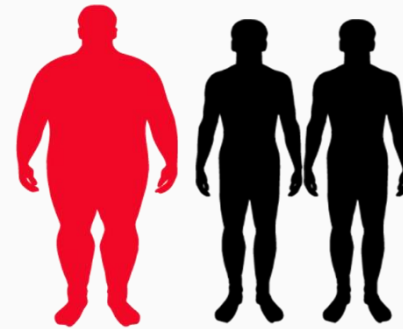
1 out of 10

10.2% are chronic
energy deficient



1 out of 3

32.7% are overweight
and obese



Prevalence of high waist circumference and high waist hip ratio is higher among females than males, making them more at risk to non-communicable diseases



Department of Science and Technology
Food and Nutrition Research Institute



Summary

Adults, 20 years old and over

- Chronic Energy Deficiency prevalence generally decreased among provinces except in Bataan, Pampanga and Zambales
- Overweight and obesity was almost the same in the region with slight changes in Aurora and Bataan



Department of Science and Technology
Food and Nutrition Research Institute





Food Security Status Region III (Central Luzon)

2015 Updating of the Nutritional Status of Filipino Children and Other Population Groups



Department of Science and Technology
Food and Nutrition Research Institute



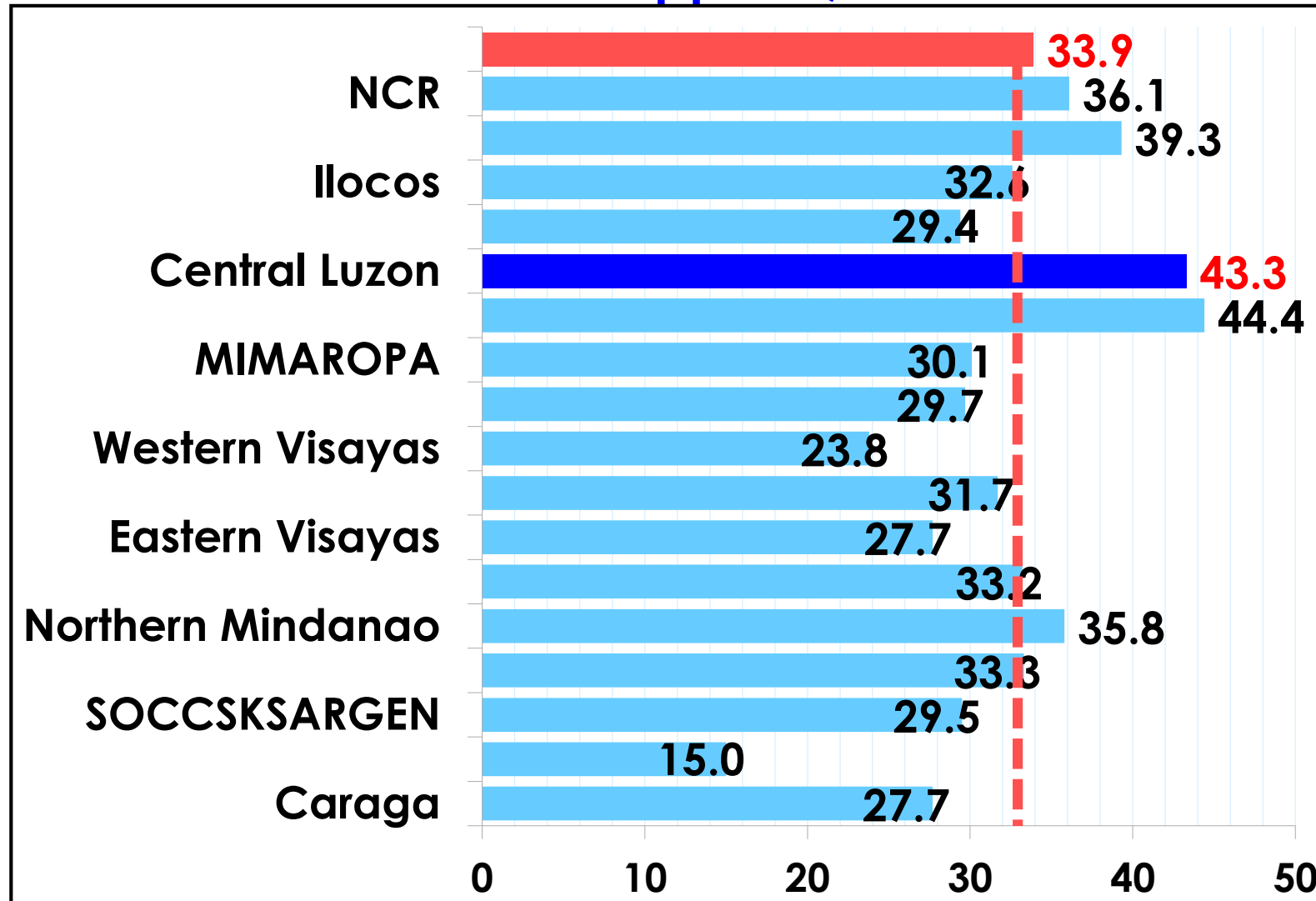
Results (Based on HFIIAS)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of food secure households by region: Philippines, 2015



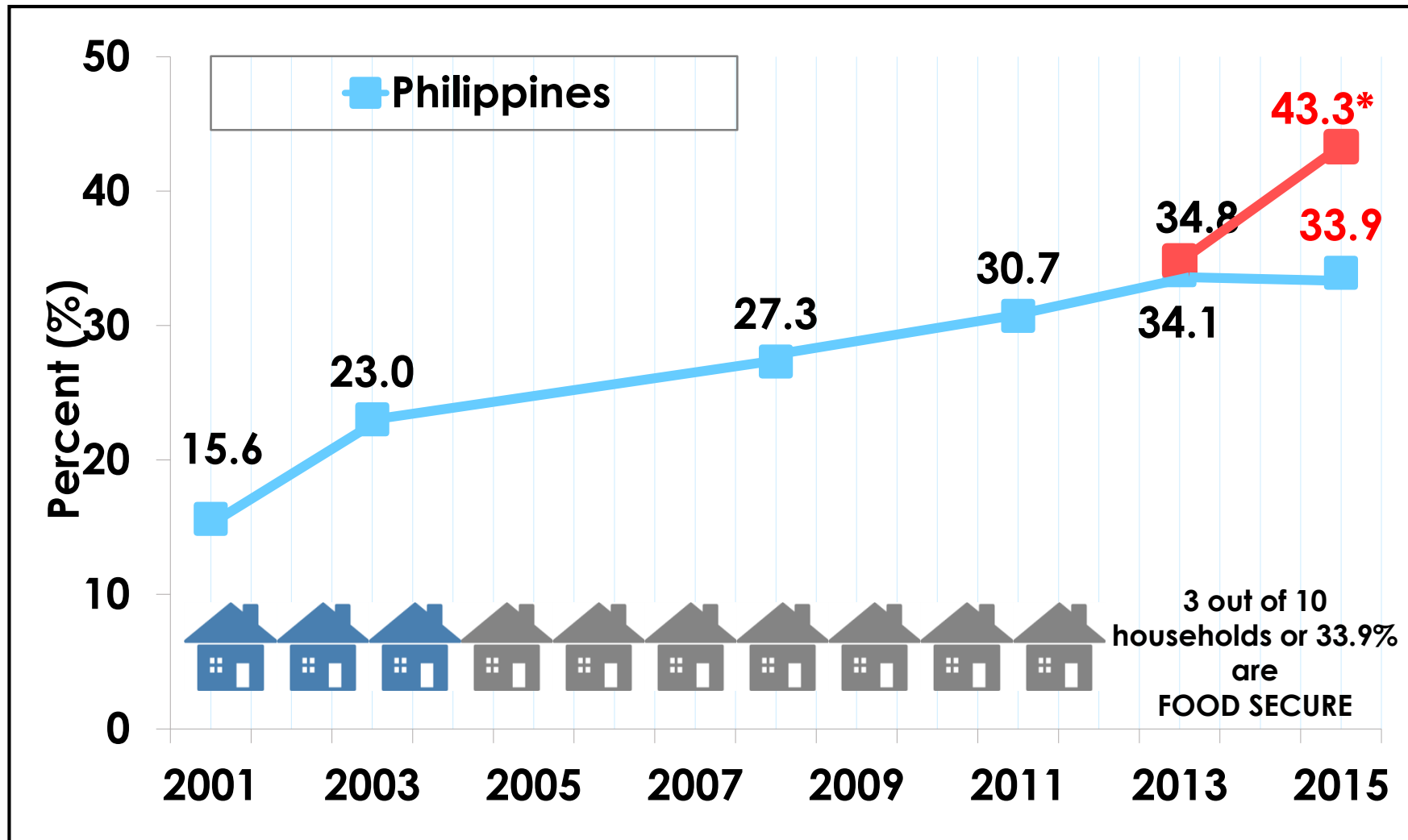
| LL | UL |
|------|------|
| 33.0 | 34.7 |
| 33.5 | 38.7 |
| 35.5 | 43.2 |
| 29.9 | 35.4 |
| 26.3 | 32.8 |
| 40.3 | 46.3 |
| 41.8 | 47.1 |
| 26.4 | 34.2 |
| 26.7 | 32.8 |
| 21.7 | 26.0 |
| 28.7 | 34.9 |
| 24.7 | 30.8 |
| 28.8 | 37.8 |
| 31.4 | 40.4 |
| 29.8 | 37.0 |
| 25.9 | 33.3 |
| 11.7 | 18.9 |
| 24.4 | 31.4 |



Department of Science and Technology
Food and Nutrition Research Institute



Trend in Household Food Security Status: Philippines (2001-2015)



¹ Reference period for food security:

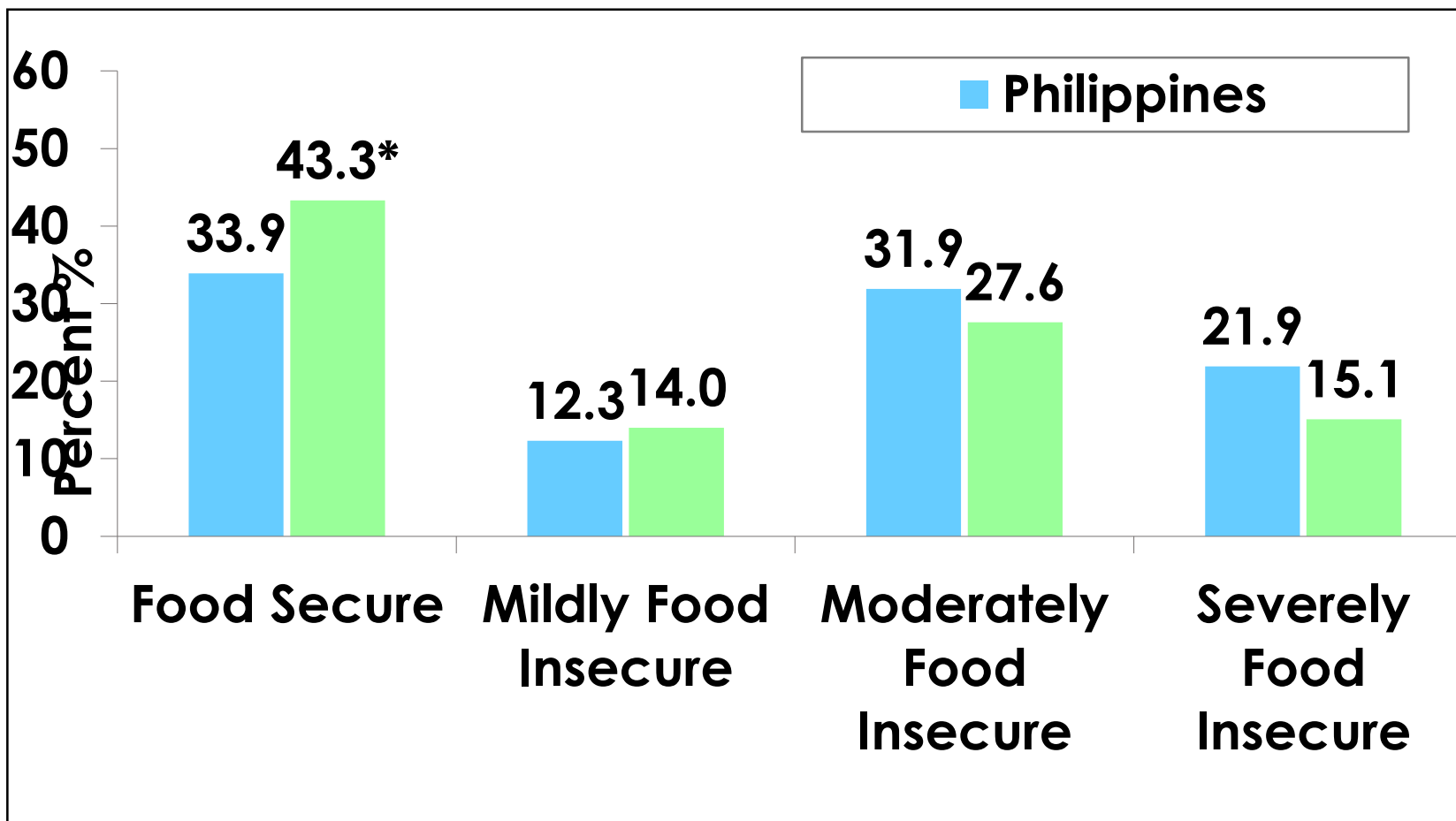
2001-2003: past 6 months, Radimer/Cornell Tool

2008-2011: past 3 months, Radimer/Cornell Tool

2013: past month (30 days), HFIAS

2015: past month (30 days), HFIAS and past 3 months, Radimer/Cornell Tool

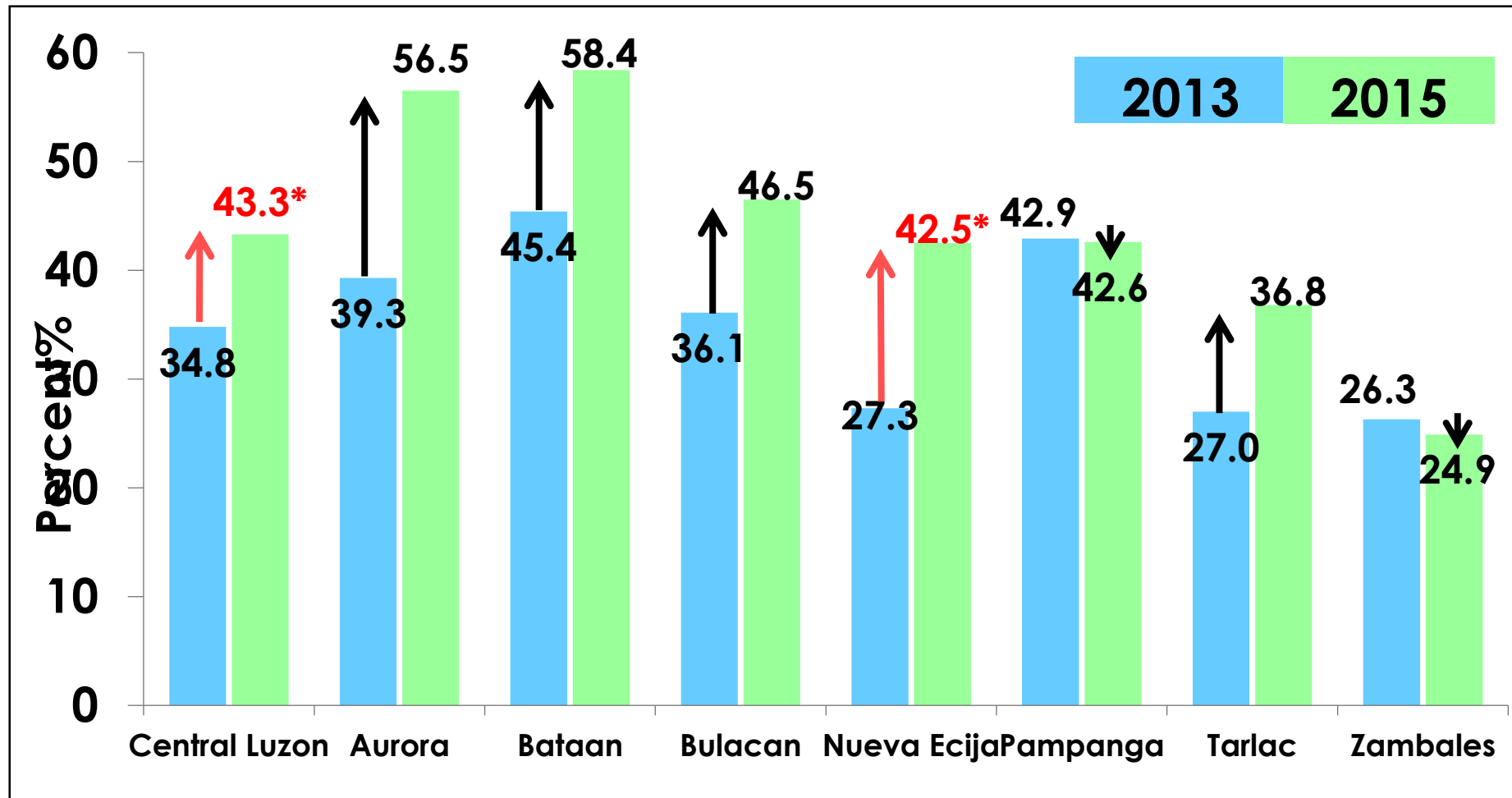
Percentage distribution of households by food security status (HFIAS): Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



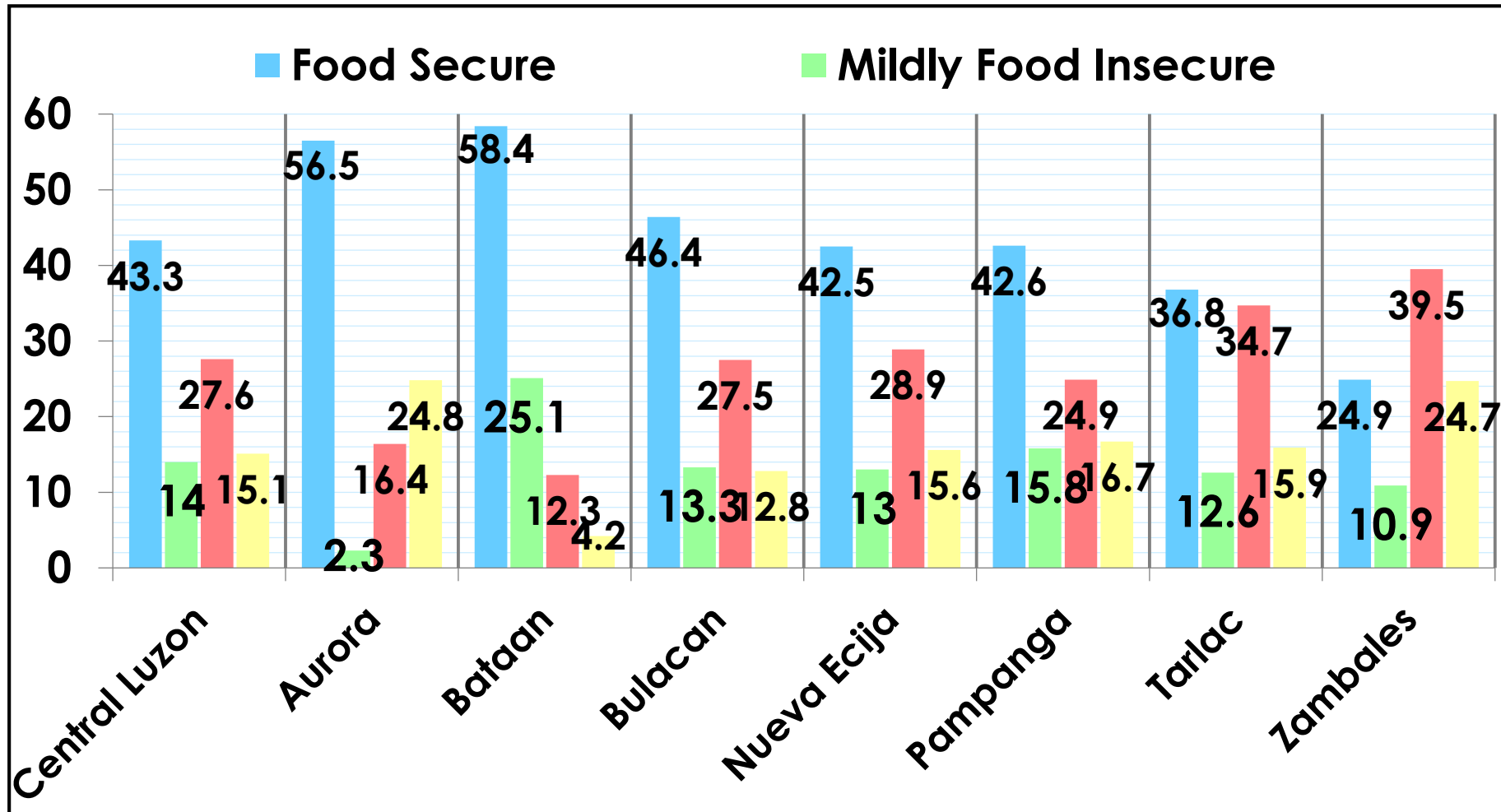
Percentage of food secure households (HFIAS) by province of Central Luzon: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of households by food security status (HFIAS) by province of Central Luzon: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Summary

- 3 out of 10 Filipino households were found to be food secure.
- Over the years, an increasing trend was observed in the percentage of household considered food secure from 15.6% in 2001 to 33.9% in 2015.
- However, this increase was not enough since most number of Filipino households or 2/3 of the Filipino population still suffer from food insecurity.



Summary

- Among the regions in the country, CALABARZON had the highest percentage of food secure households with 44.4% followed by Central Luzon (43.3%), CAR (39.3%) and NCR with 36.1%.
- Food secure households in Central Luzon (43.3%) was significantly higher than the national estimate.



Summary

- Significant increase in the number of food secure households in region of Central Luzon from the previous and recent survey was observed from 34.8% to 43.3%.
- From 2013 to 2015, percentages of food secure households in the provinces of Central Luzon increased, however only Nueva Ecija had significant increased.



Summary

- Among the provinces of Central Luzon, Bataan had the highest number of food secure households with 58.4%. It is followed by Aurora with 56.5%, Bulacan with 46.5%, Pampanga with 42.6%, Nueva Ecija 42.5%, Tarlac 36.8%, and Zambales with 24.9%.



Department of Science and Technology
Food and Nutrition Research Institute



Results (Based on HDDDS and FCS



Department of Science and Technology
Food and Nutrition Research Institute



Household Dietary Diversity Score (HDDS)

HDDS

counts the number of food groups a household consumed in the past 7 days. This indicates the quality of the household's diet.

Source: WFP, 2007



Department of Science and Technology
Food and Nutrition Research Institute



DDS Food Groups

Cereals



White tubers
and roots



Vegetables



Fruits



Meat &
Poultry



Eggs



Fish and other
seafoods



Milk and milk
products



Legumes, nuts
and seeds



Sugar and
Honey



Oils and Fats



Beverages,
spices and
condiments



Department of Science and Technology
Food and Nutrition Research Institute



Food Consumption Score (FCS)

FCS

a composite score based on dietary diversity, food frequency, and relative nutritional importance of different food groups.

Source: WFP, 2007



Department of Science and Technology
Food and Nutrition Research Institute



Main Staples



Vegetables



Fruits



Milk



Meat & Fish



FCS Food Groups

Pulses



Sugar



Oil



Condiments



Department of Science and Technology
Food and Nutrition Research Institute



Thresholds for creating food consumption groups

| Food Consumption Score | Profile |
|------------------------|------------|
| ≤ 28 | Poor |
| $> 28 - 42$ | Borderline |
| > 42 | Acceptable |

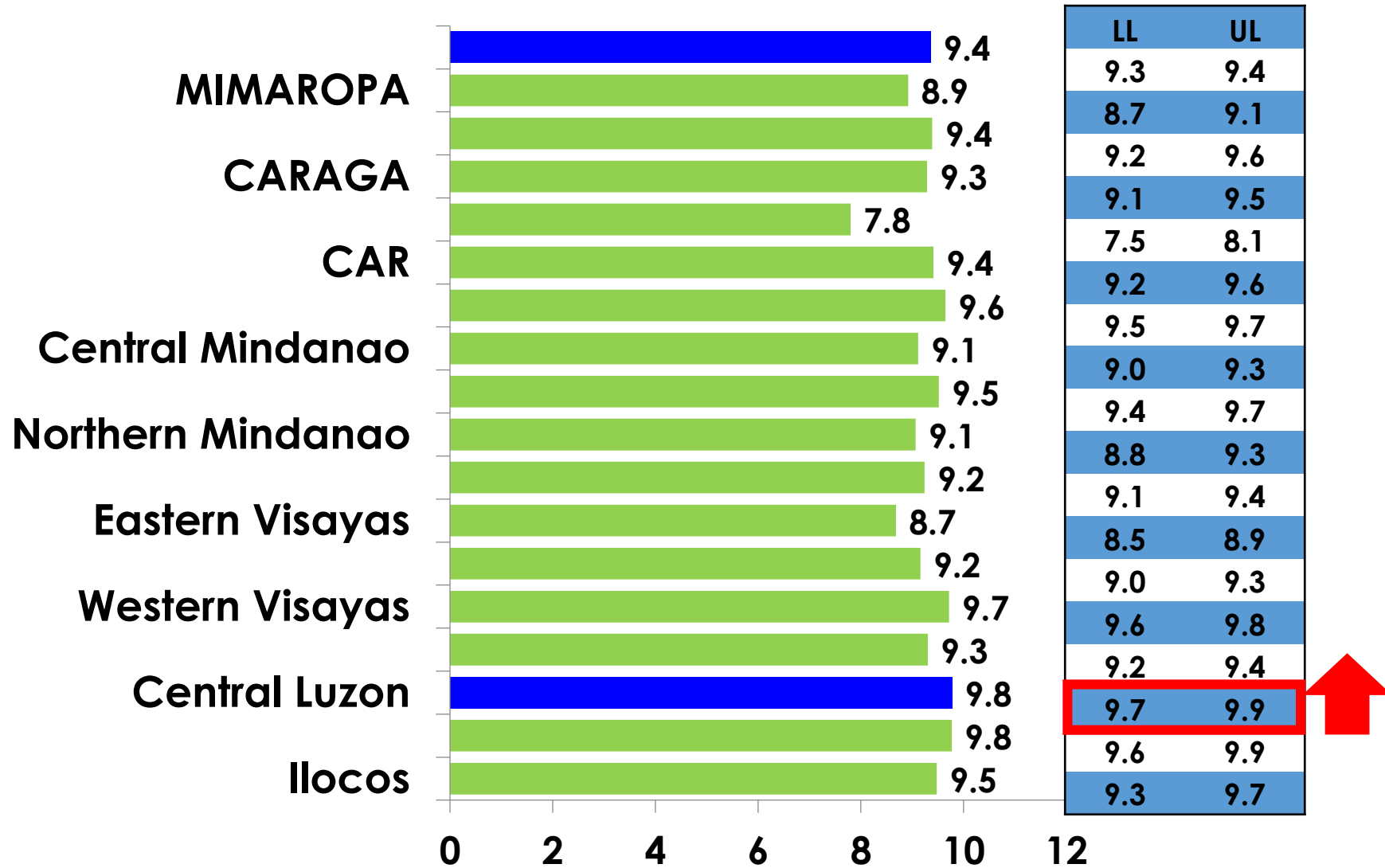
Source: WFP (2007, 17ff)



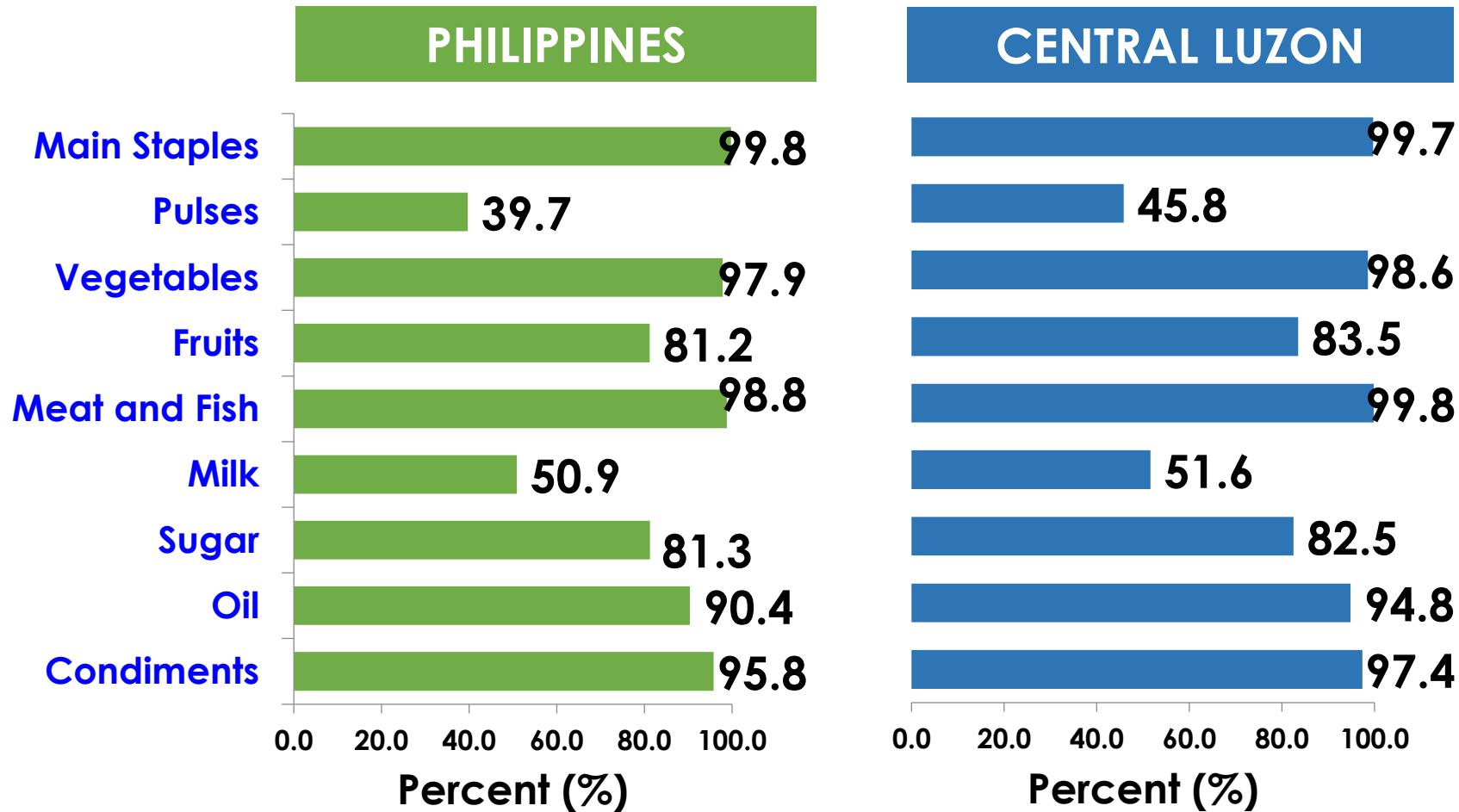
Department of Science and Technology
Food and Nutrition Research Institute



Mean dietary diversity score by region: Philippines, 2015



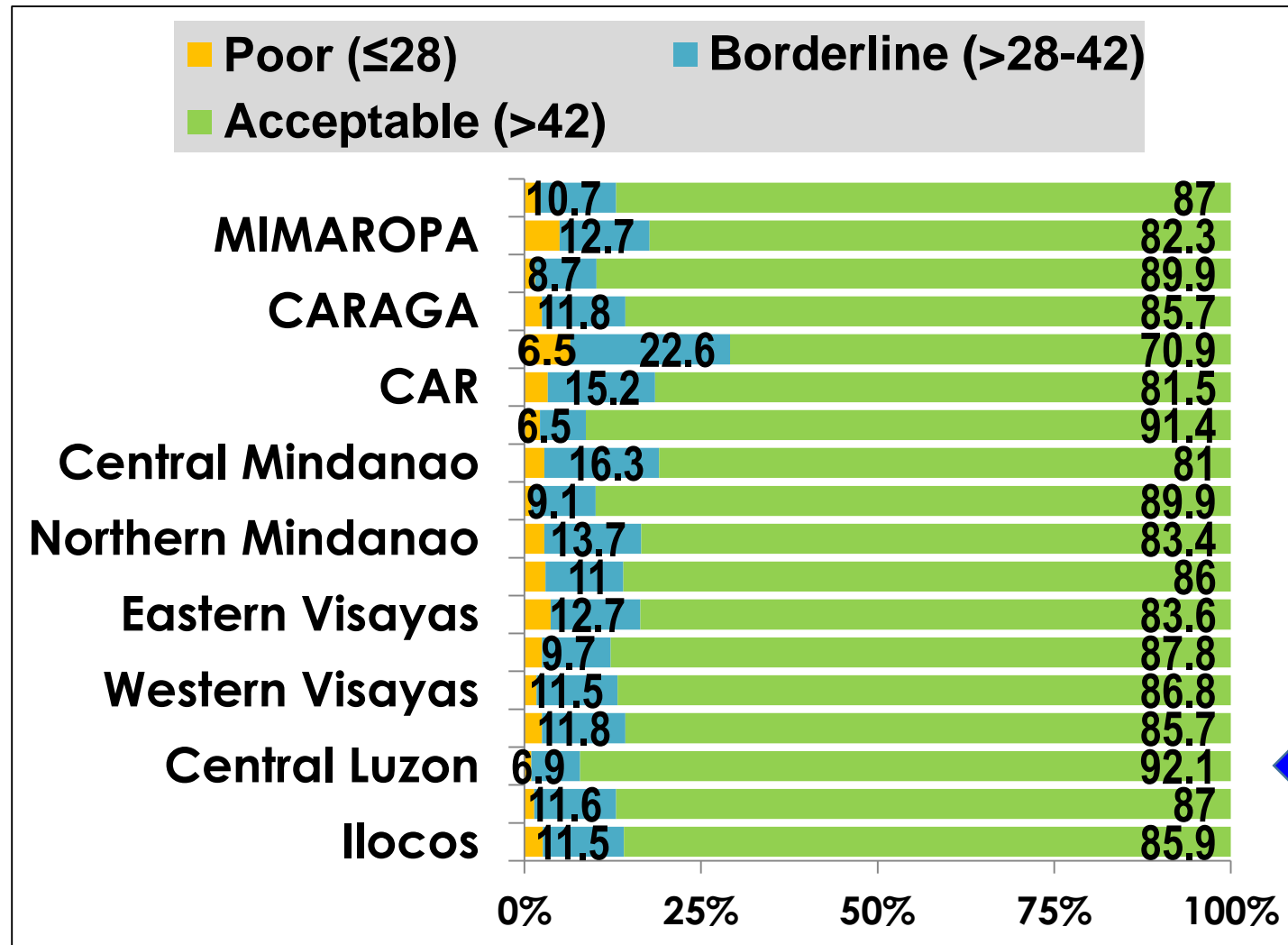
Comparison of the percentage distribution of households by intake of the nine food groups



Department of Science and Technology
Food and Nutrition Research Institute



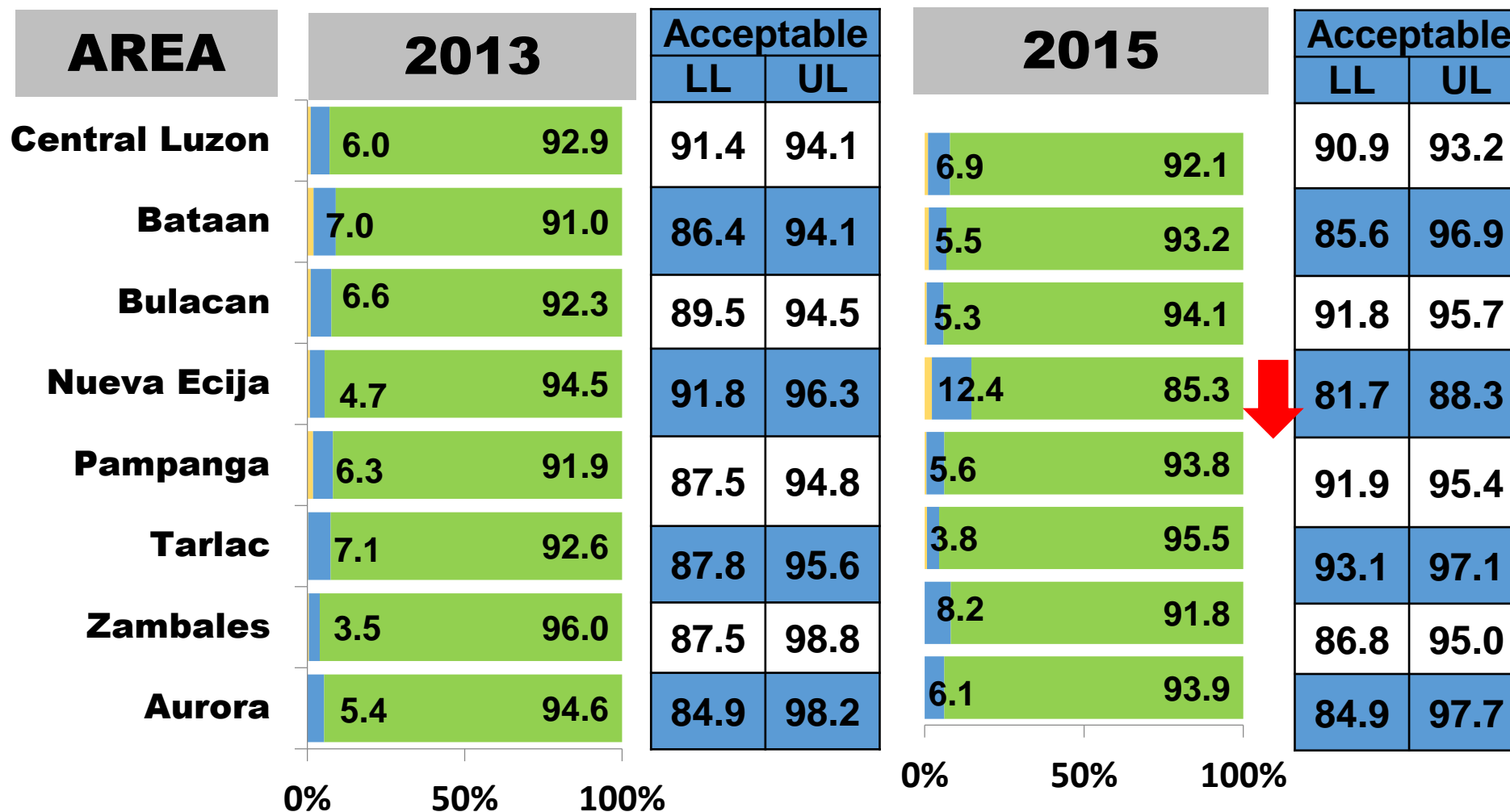
Percentage distribution of households by food consumption category: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



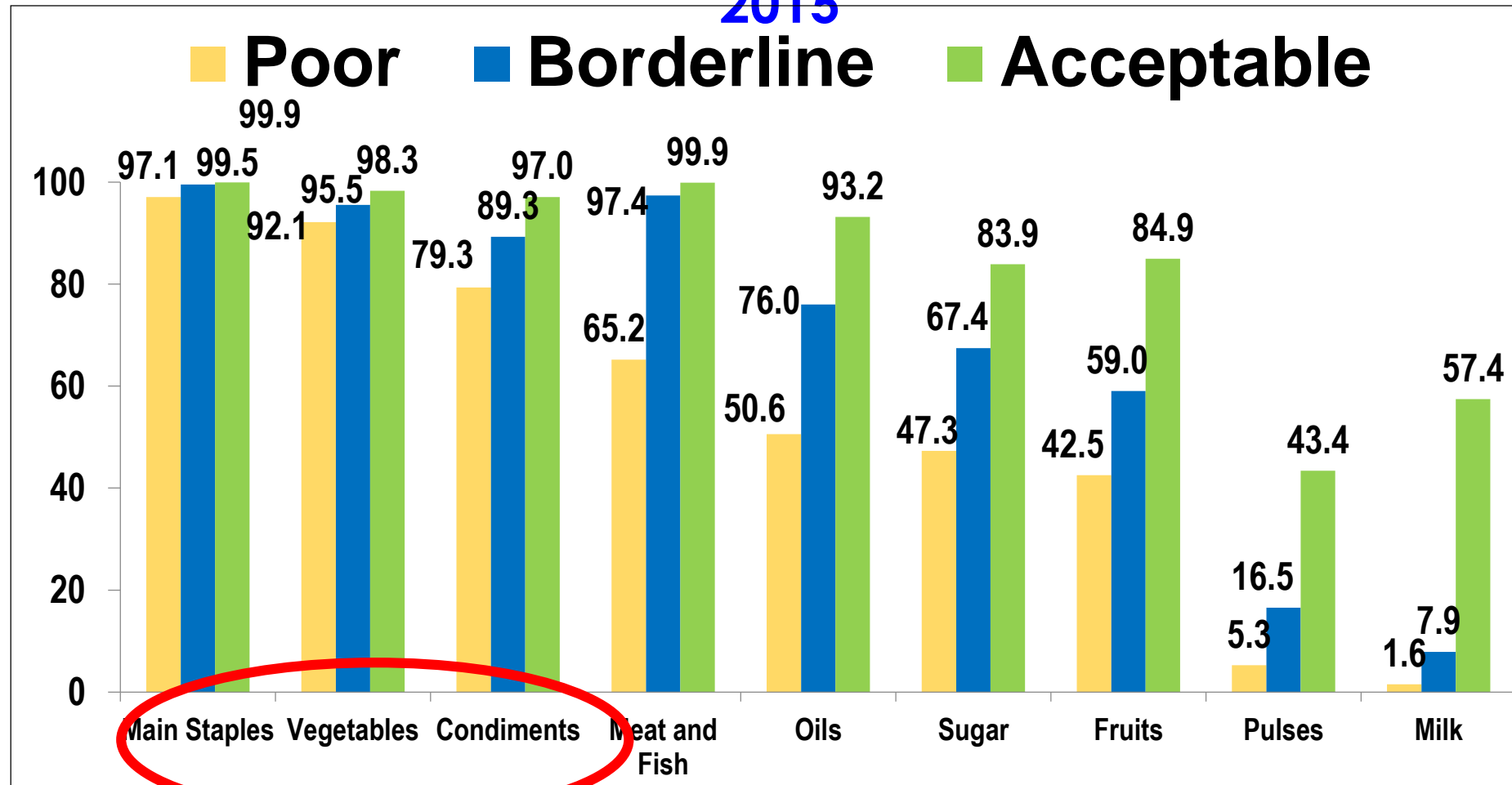
Percentage distribution of households in **CENTRAL LUZON** by food consumption category per province: Philippines, 2013-2015



Department of Science and Technology
Food and Nutrition Research Institute



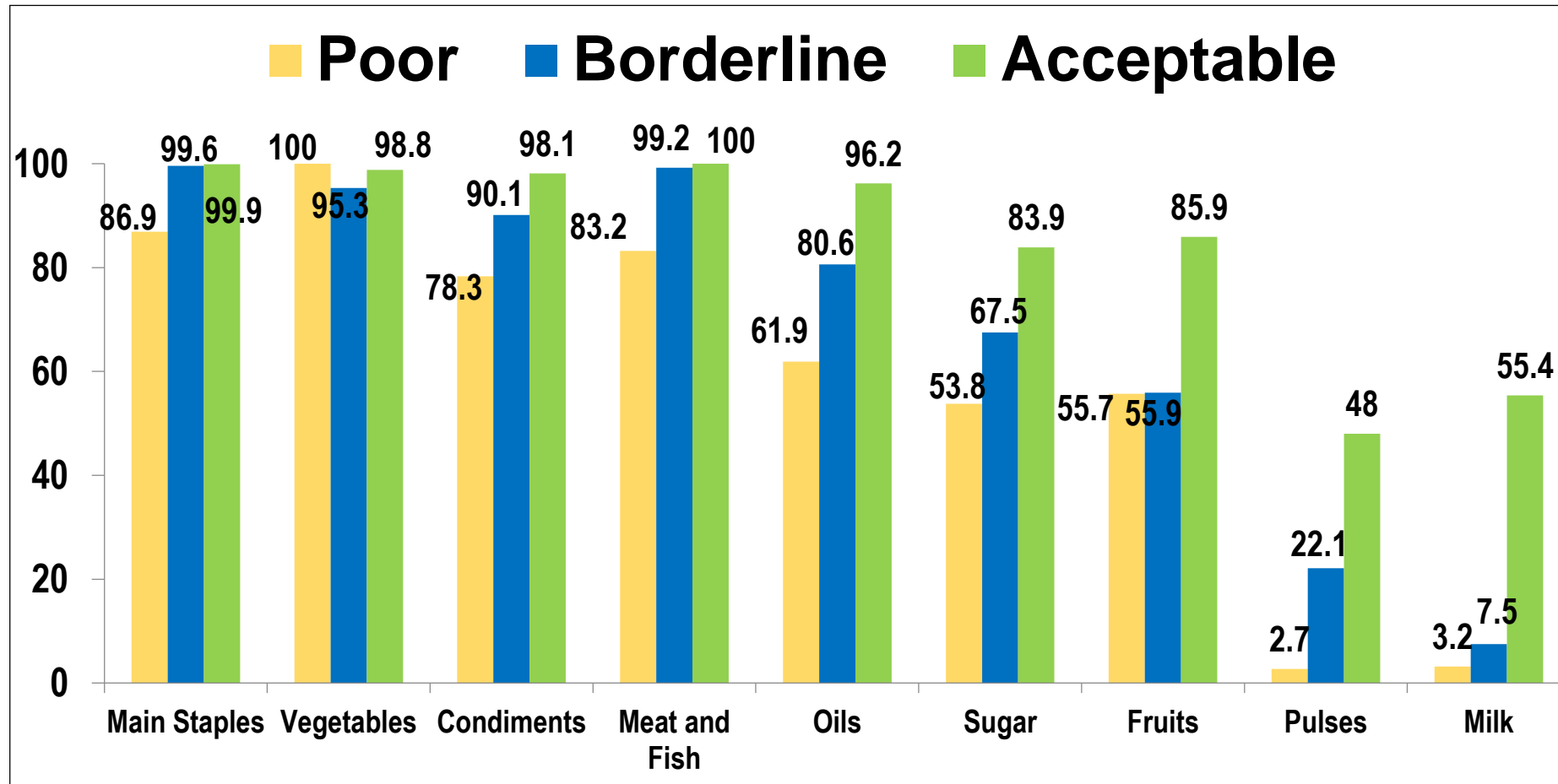
Proportion of households consuming the nine food groups by food consumption category: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



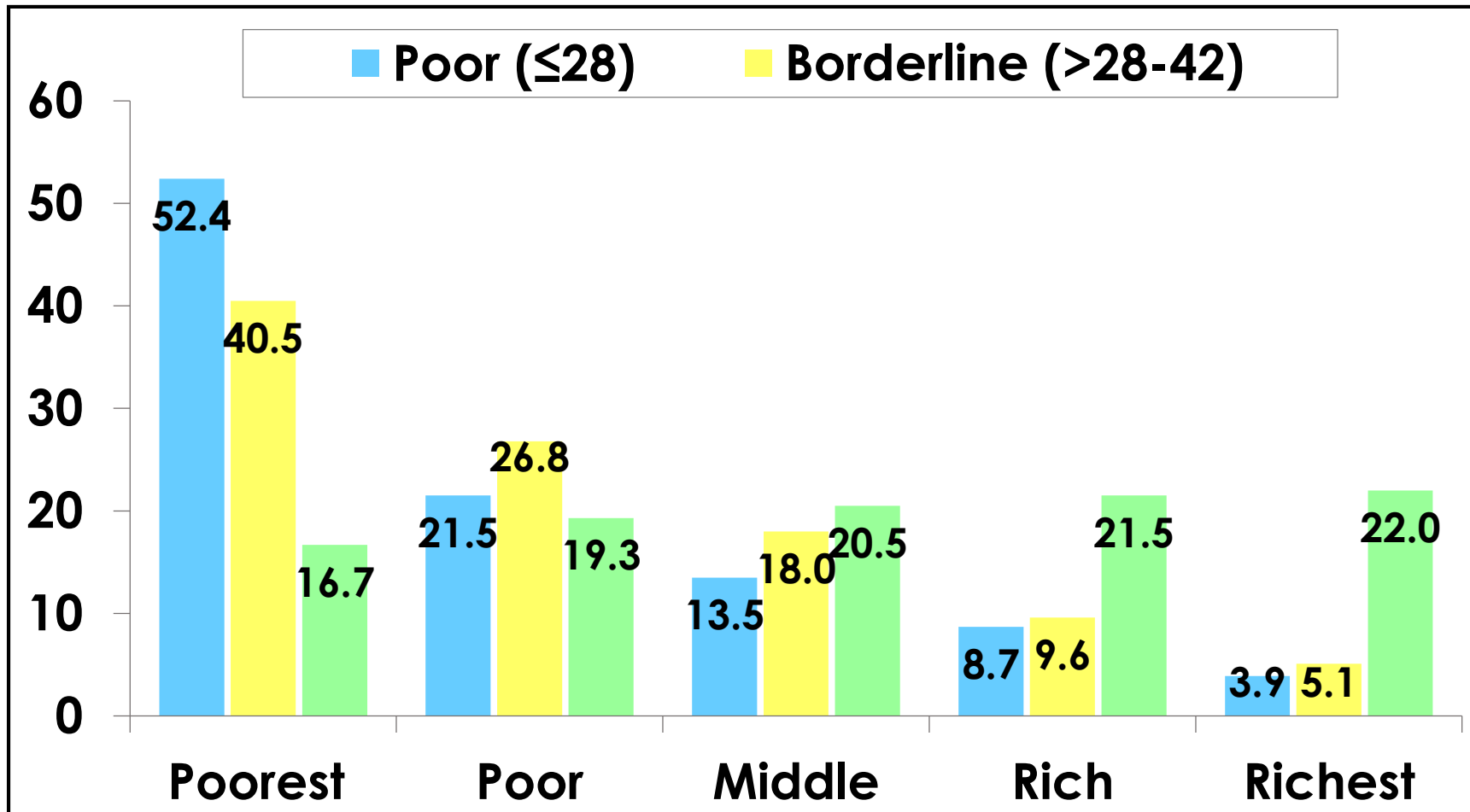
Proportion of households in **CENTRAL LUZON** consuming the nine food groups by food consumption category: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of households by food consumption category by wealth quintile: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of households by **source** of foods consumed: **Philippines**, 2015

| Food Group | Purchase | Own produce | Given/Free | Others |
|--------------------------------------|----------|-------------|------------|--------|
| Cereals | 87.4 | 9.3 | 1.9 | 1.5 |
| Vitamin A-rich vegetables and tubers | 83.7 | 10.8 | 4.8 | 0.8 |
| White tubers and roots | 77.4 | 15.4 | 5.8 | 1.4 |
| Dark, green leafy vegetables | 42.8 | 46.0 | 6.6 | 4.6 |
| Other Vegetables | 72.7 | 21.0 | 1.7 | 4.6 |
| Vitamin A-rich fruits | 54.3 | 31.6 | 9.4 | 4.7 |
| Other fruits | 72.4 | 19.4 | 6.8 | 1.5 |
| Meats | 91.5 | 3.8 | 3.8 | 1.0 |
| Organ meats (Iron-rich) | 89.7 | 4.7 | 4.8 | 0.9 |
| Eggs | 93.7 | 5.0 | 0.8 | 0.5 |
| Fish and shellfish | 92.2 | 1.8 | 2.4 | 3.6 |
| Legumes, nuts and seeds | 91.9 | 4.8 | 2.7 | 0.6 |
| Milk and milk products | 98.1 | 0.7 | 0.9 | 0.4 |
| Oils and Fats | 98.4 | 0.9 | 0.5 | 0.2 |
| Sweets | 98.4 | 0.5 | 0.8 | 0.3 |
| Spice, Condiments, and Beverages | 98.5 | 0.7 | 0.6 | 0.2 |



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of households by **source** of foods consumed: **CENTRAL LUZON, 2015**

| Food Group | Purchase | Own Produce | Given/Free | Others |
|--------------------------------------|----------|-------------|------------|--------|
| Cereals | 89.1 | 7.7 | 2.0 | 1.2 |
| Vitamin A-rich vegetables and tubers | 90.8 | 4.7 | 3.8 | 0.6 |
| White tubers and roots | 92.3 | 3.8 | 3.2 | 0.7 |
| Dark, green leafy vegetables | 51.4 | 37.7 | 6.5 | 4.4 |
| Other Vegetables | 80.0 | 12.6 | 5.6 | 1.8 |
| Vitamin A-rich fruits | 50.1 | 34.0 | 10.4 | 5.4 |
| Other fruits | 86.7 | 7.6 | 4.7 | 1.0 |
| Meats | 94.8 | 1.5 | 2.8 | 0.8 |
| Organ meats (Iron-rich) | 93.4 | 1.7 | 3.6 | 1.3 |
| Eggs | 95.8 | 2.6 | 1.0 | 0.6 |
| Fish and shellfish | 93.9 | 1.3 | 2.7 | 2.1 |
| Legumes, nuts and seeds | 95.0 | 1.7 | 2.7 | 0.7 |
| Milk and milk products | 97.4 | 0.9 | 1.2 | 0.5 |
| Oils and Fats | 98.8 | 0.4 | 0.6 | 0.2 |
| Sweets | 98.2 | 0.6 | 1.0 | 0.2 |
| Spice, Condiments, and Beverages | 98.9 | 0.4 | 0.6 | 0.2 |



Summary

- Majority of the households in all regions consumed 9 to 10 different food groups.
- Cereals (99.8%), meat & fish (98.83%), vegetables (97.85%), and condiments (95.8%) were the most consumed food groups by the Filipino households.
- Majority of the households in all regions have “Acceptable” food consumption level.



Summary

- **ARMM had the least varied intake consuming 7 to 8 food groups only. It is followed by MIMAROPA and Eastern Visayas.**
- **Households in Central Luzon had access to food mainly through purchasing/buying particularly on food groups such as main staples, meat and fish, condiments, etc. while 3 out 10 households have own production of vegetables and fruits.**



Department of Science and Technology
Food and Nutrition Research Institute





Status of Maternal Health and Nutrition and Infant and Young Child Feeding Practices Region III (Central Luzon)

2015 Updating of the Nutritional Status of Filipino Children and Other Population Groups



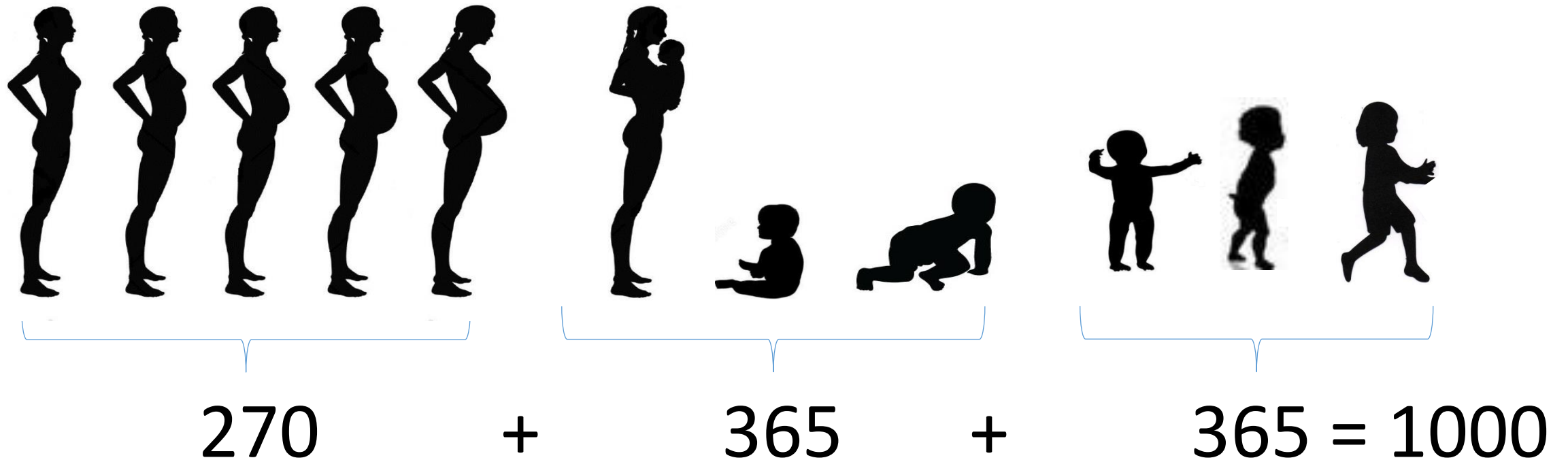
Department of Science and Technology
Food and Nutrition Research Institute



FIRST 100 DAYS



First 1000 Days of Life



Department of Science and Technology
Food and Nutrition Research Institute



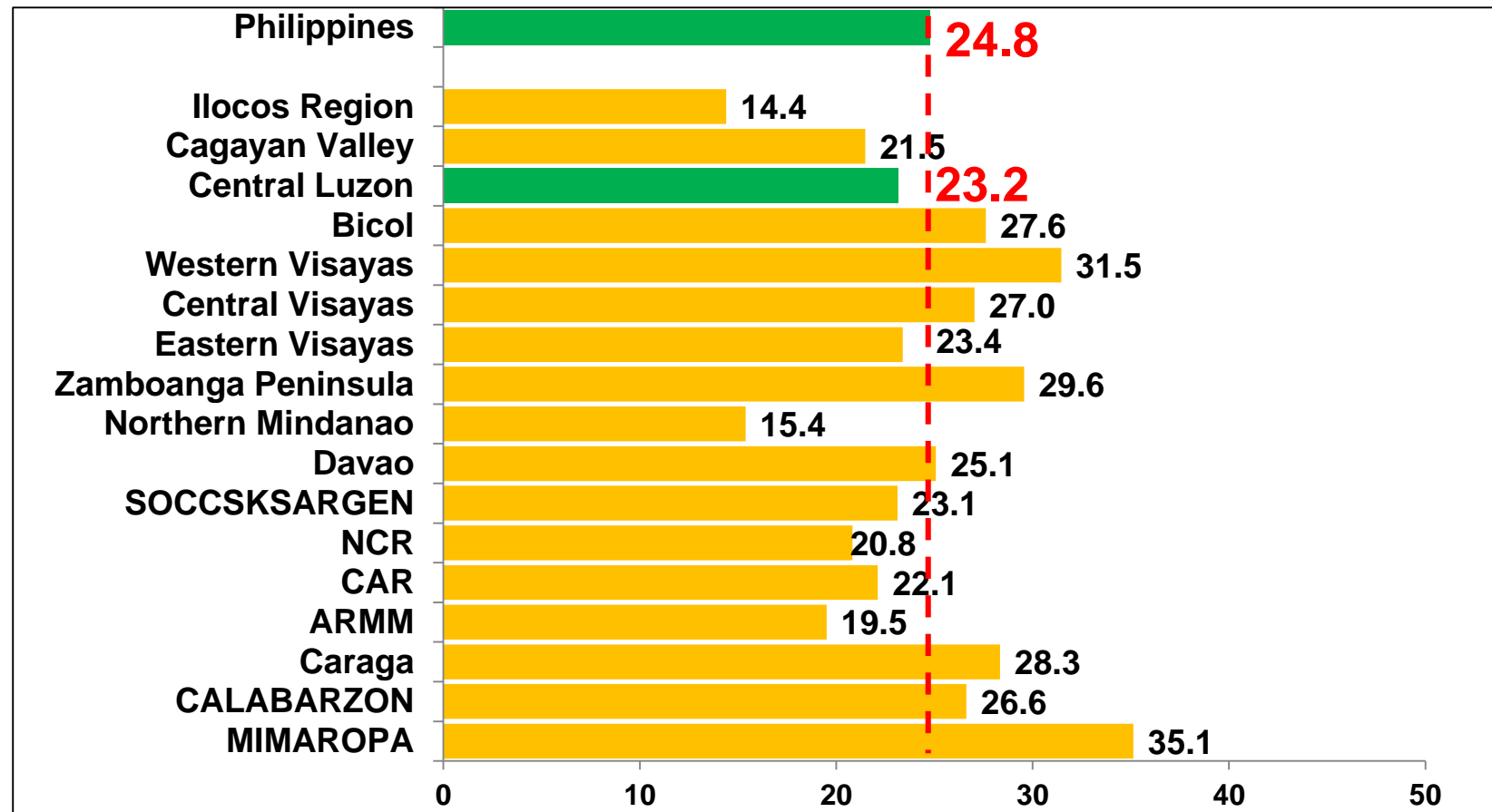
Nutritional Status of Mothers



Department of Science and Technology
Food and Nutrition Research Institute



Prevalence of **nutritionally-at-risk*** pregnant women by region: Philippines, 2015



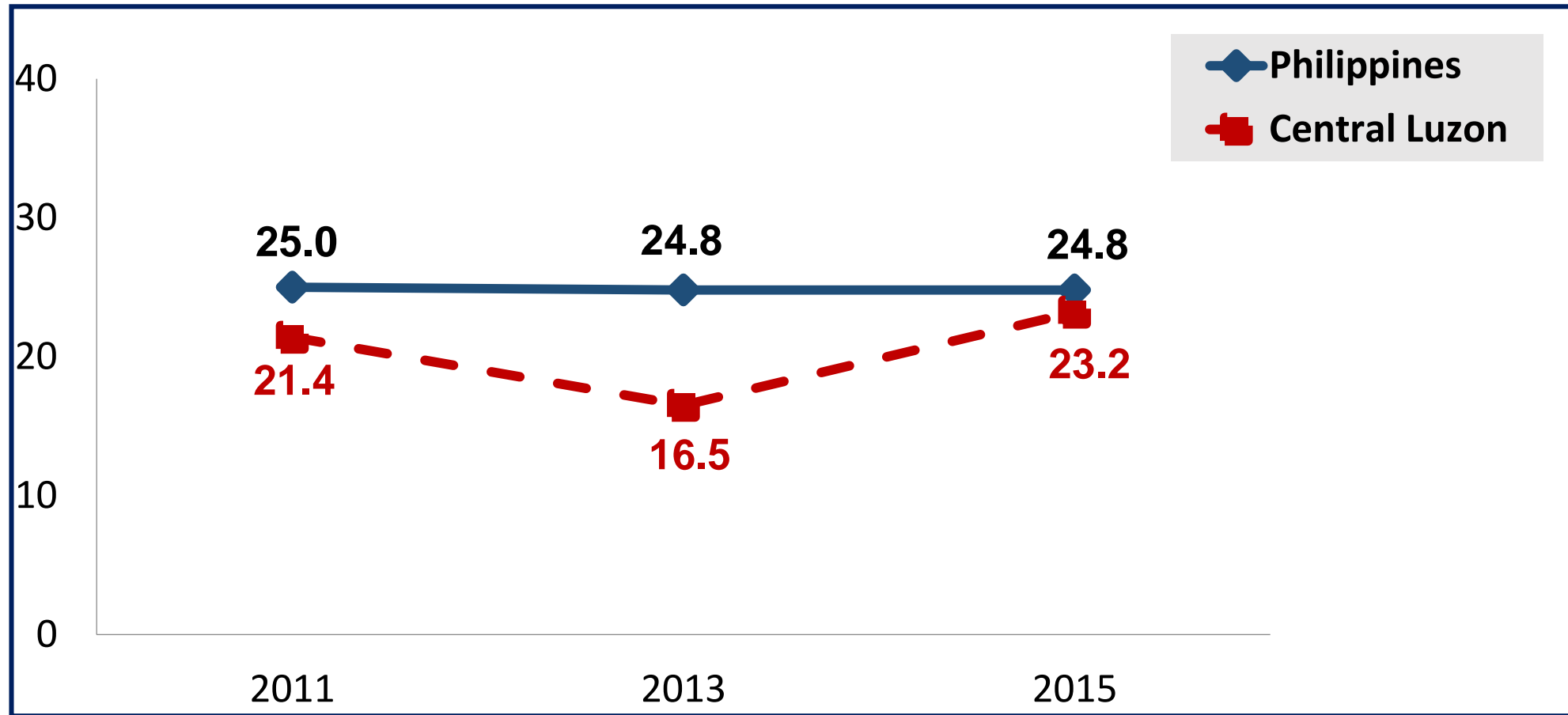
*(Magbitang, 1988)



Department of Science and Technology
Food and Nutrition Research Institute



Trends in the prevalence of **nutritionally-at-risk*** pregnant **women**: Philippines & Central Luzon, 2011-2015



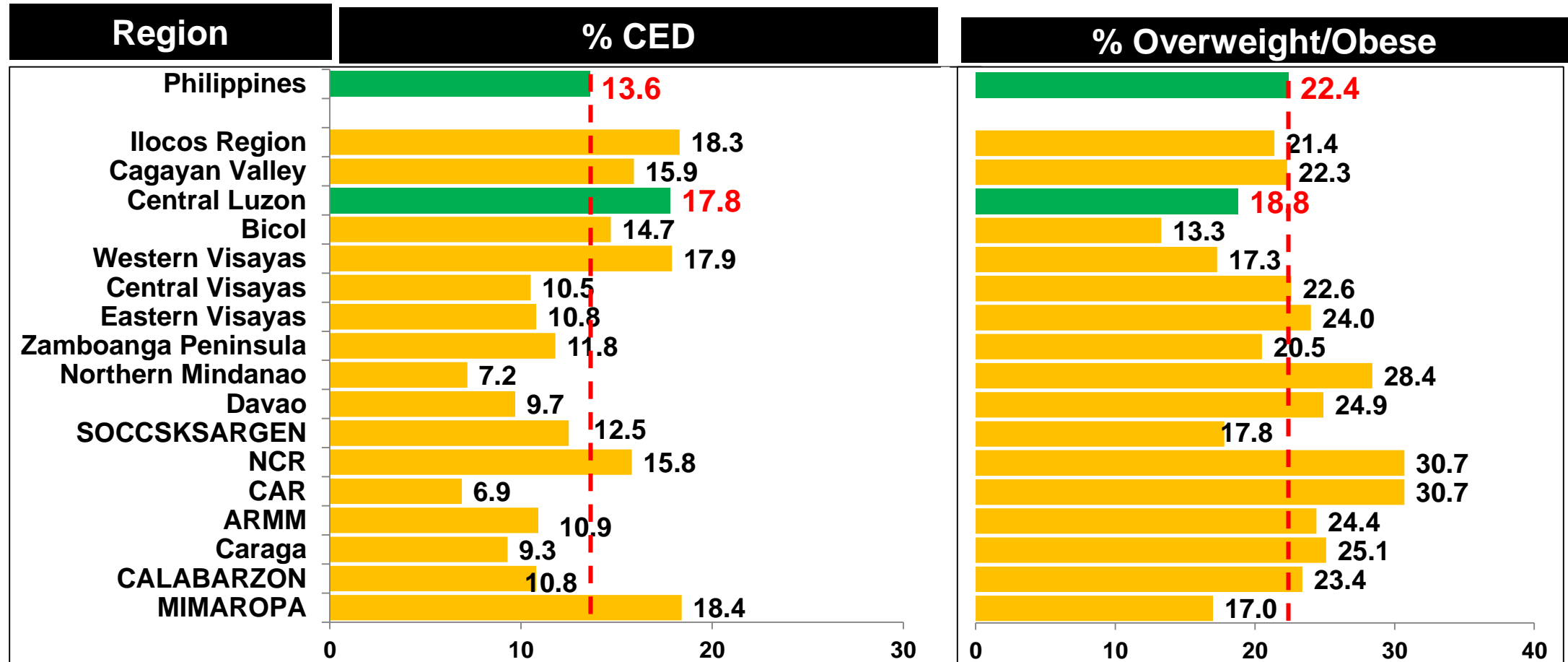
*(Magbitang, 1988)



Department of Science and Technology
Food and Nutrition Research Institute



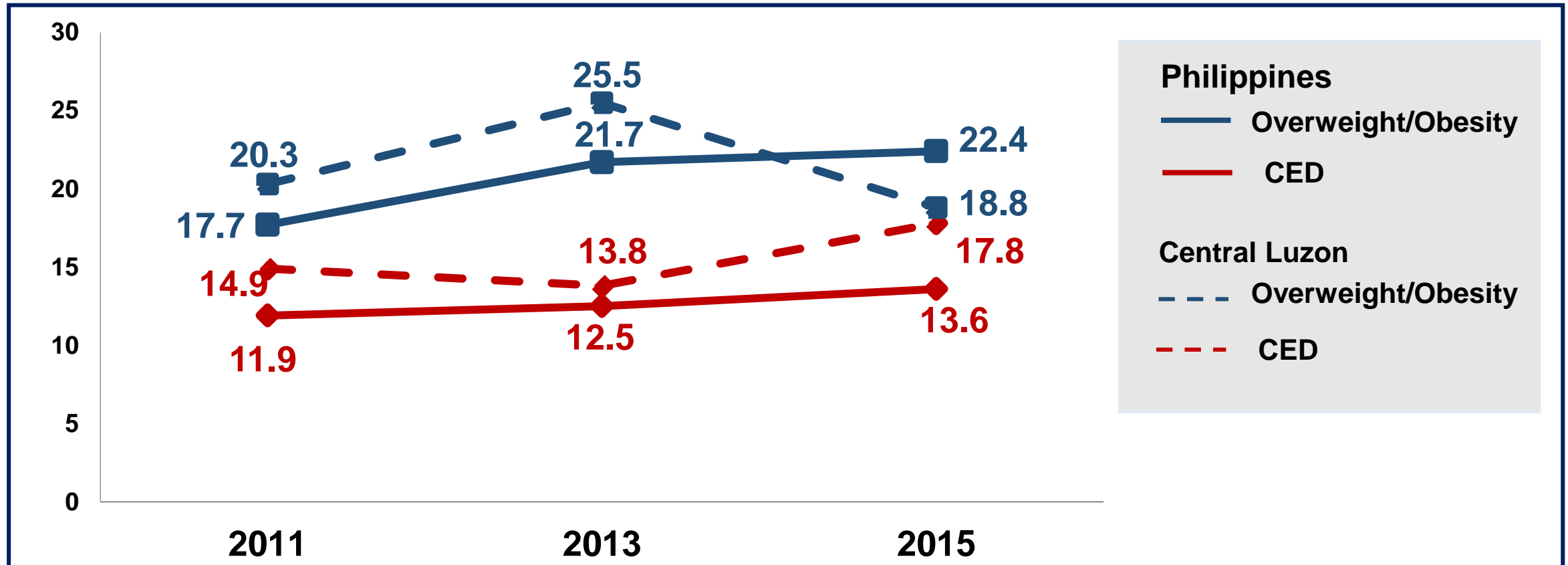
Prevalence of chronic energy deficiency and overweight/obesity among lactating mothers by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends in the prevalence of **CED** and **Overweight/Obesity** among **lactating mothers**: Philippines & Central Luzon, 2011-2015



*2011 – Lactating mothers with children 0-5 years old

**2013 & 2015 – Lactating mothers with children 0-3 years old



Department of Science and Technology
Food and Nutrition Research Institute



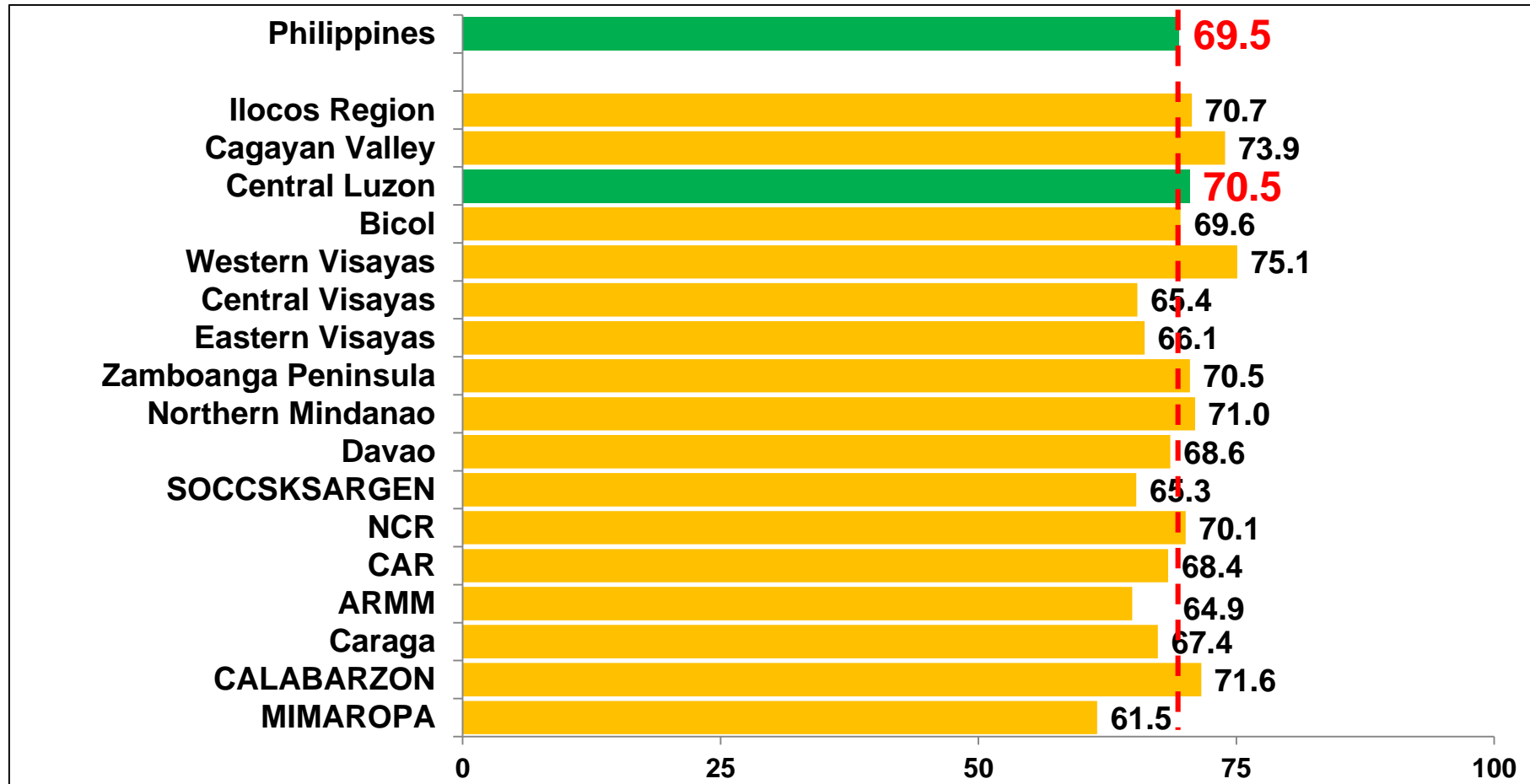
Prenatal Care



Department of Science and Technology
Food and Nutrition Research Institute



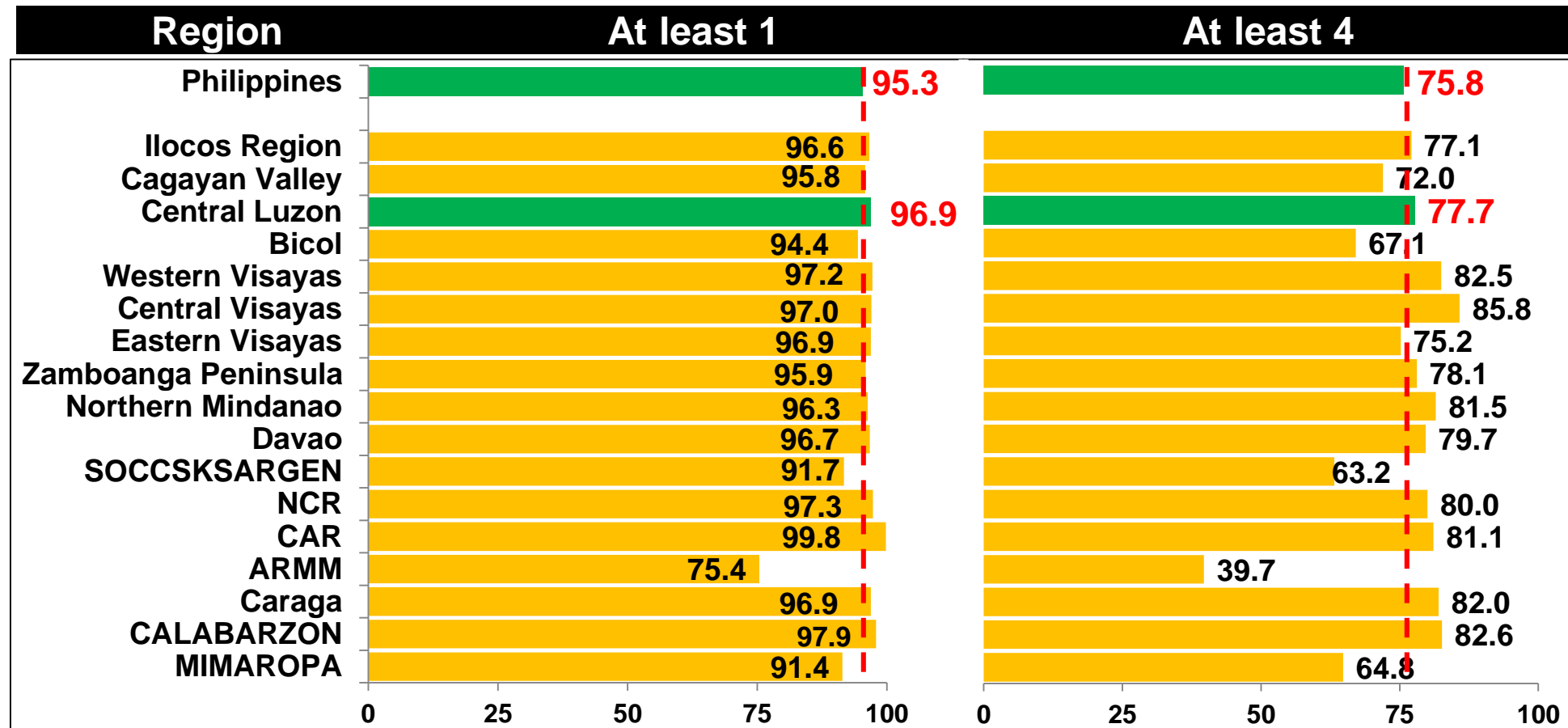
Percentage distribution of mothers with on time (1st trimester) first prenatal check-up during their last/current pregnancy by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of mothers by number of prenatal check-up during their last/current pregnancy by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of **mothers with at least four (4) prenatal check-up** during their last/current pregnancy: Philippines and Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|------|------|----------------|----------------|--------------|
| Philippines | 8322 | 0.7 | 74.7 | 76.9 | 75.8 |
| Central Luzon | 641 | 2.2 | 74.1 | 80.9 | 77.7 |
| Aurora | 11 | 12.3 | 54.4 | 92.7 | 79.6 |
| Bataan | 20 | 11.1 | 55.1 | 86.7 | 73.9 |
| Bulacan | 187 | 3.7 | 73.0 | 84.5 | 79.3 |
| Nueva Ecija | 165 | 6.2 | 58.7 | 74.9 | 67.3 |
| Pampanga | 136 | 3.8 | 77.8 | 90.5 | 85.3 |
| Tarlac | 94 | 6.9 | 66.2 | 87.5 | 78.7 |
| Zambales | 28 | 8.4 | 64.7 | 92.0 | 82.1 |



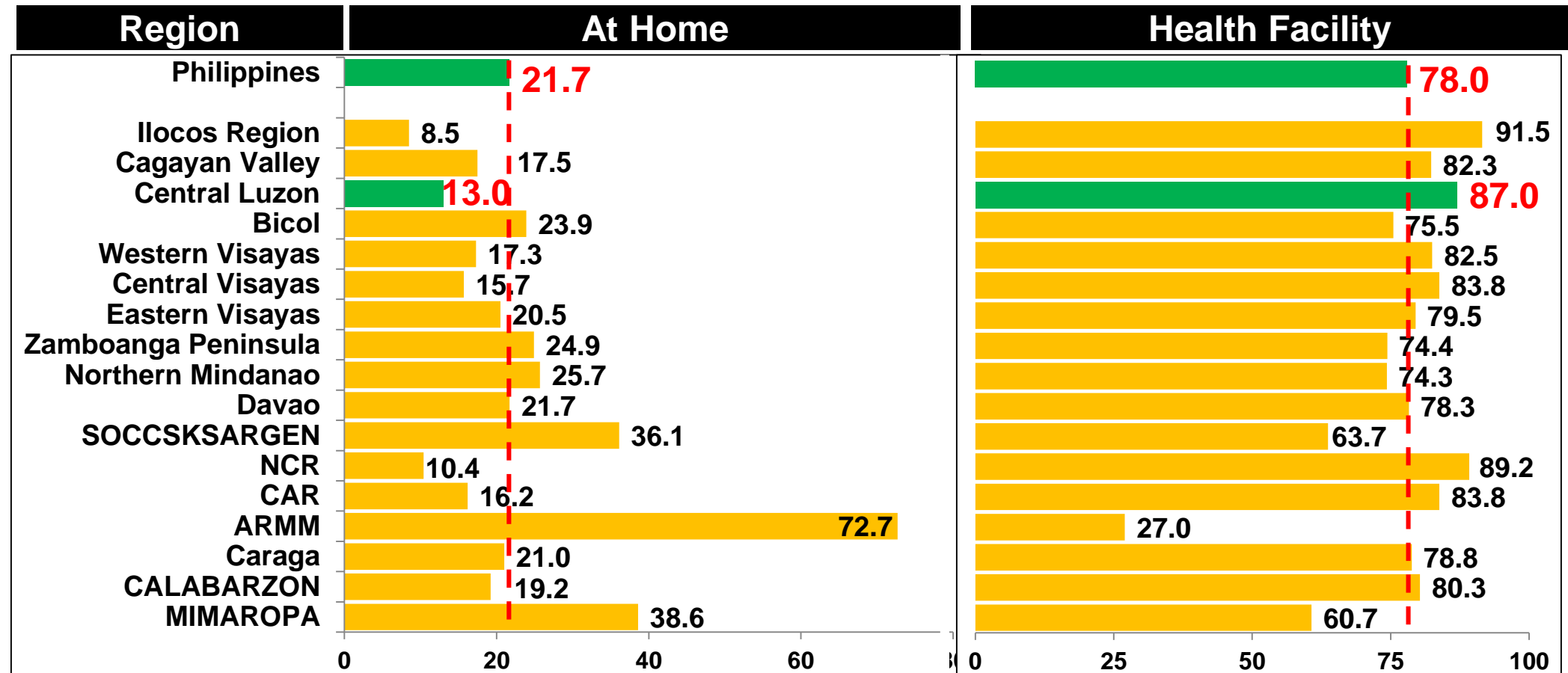
Delivery Status



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of mothers by place of delivery during their last/current pregnancy by region: Philippines, 2015

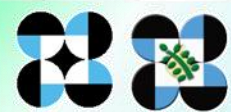


Department of Science and Technology
Food and Nutrition Research Institute

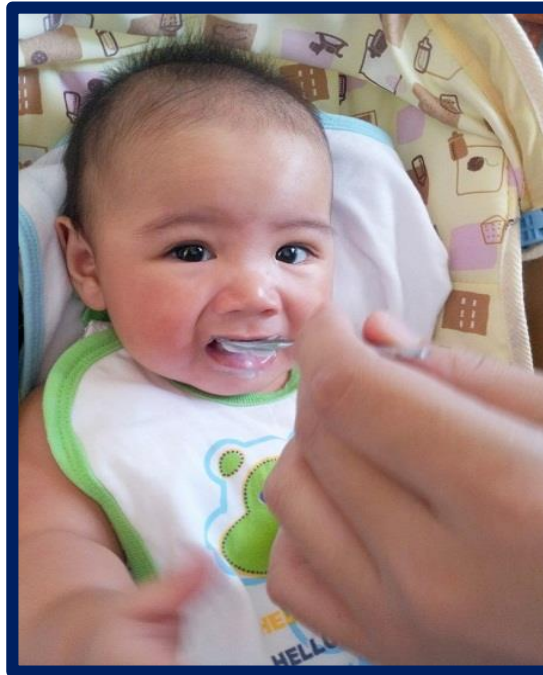


Percentage distribution of mothers who delivered in a health facility during their last/current pregnancy: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|--------------------------|-----|----------------|----------------|--------------|
| Philippines | 7553 | 0.8 | 76.8 | 79.3 | 78.0 |
| Central Luzon | 568 | 2.0 | 83.2 | 90.1 | 87.0 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 16 | 8.4 | 64.6 | 97.0 | 88.4 |
| Bulacan | 163 | 2.9 | 80.8 | 90.6 | 86.4 |
| Nueva Ecija | 141 | 6.0 | 68.5 | 87.3 | 79.4 |
| Pampanga | 129 | 3.0 | 84.9 | 96.5 | 92.5 |
| Tarlac | 87 | 6.9 | 70.1 | 96.5 | 88.9 |
| Zambales | 23 | 6.3 | 71.4 | 98.0 | 91.6 |



Infant and Young Child Feeding Practices



Department of Science and Technology
Food and Nutrition Research Institute





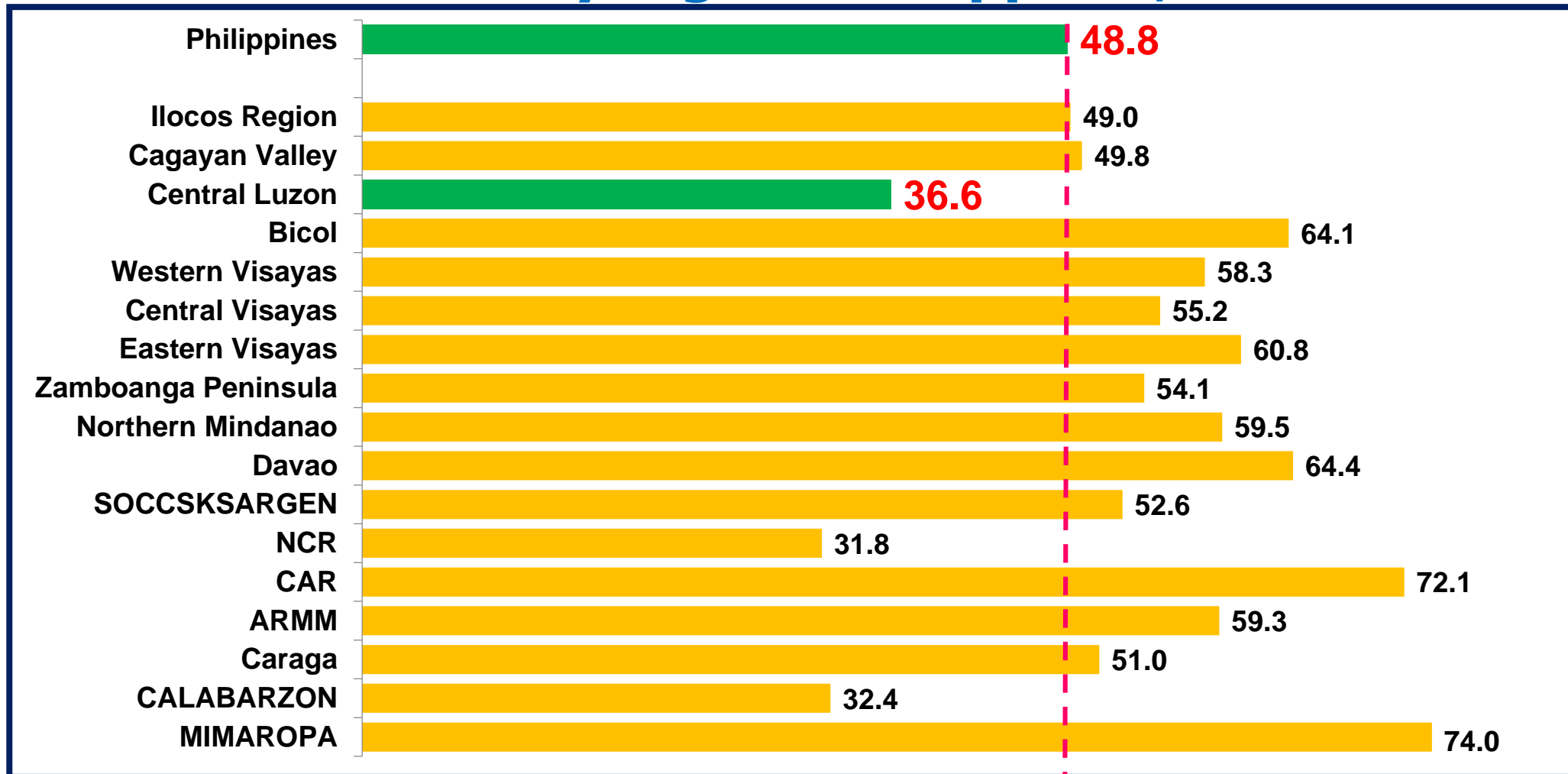
Breastfeeding Practices



Department of Science and Technology
Food and Nutrition Research Institute



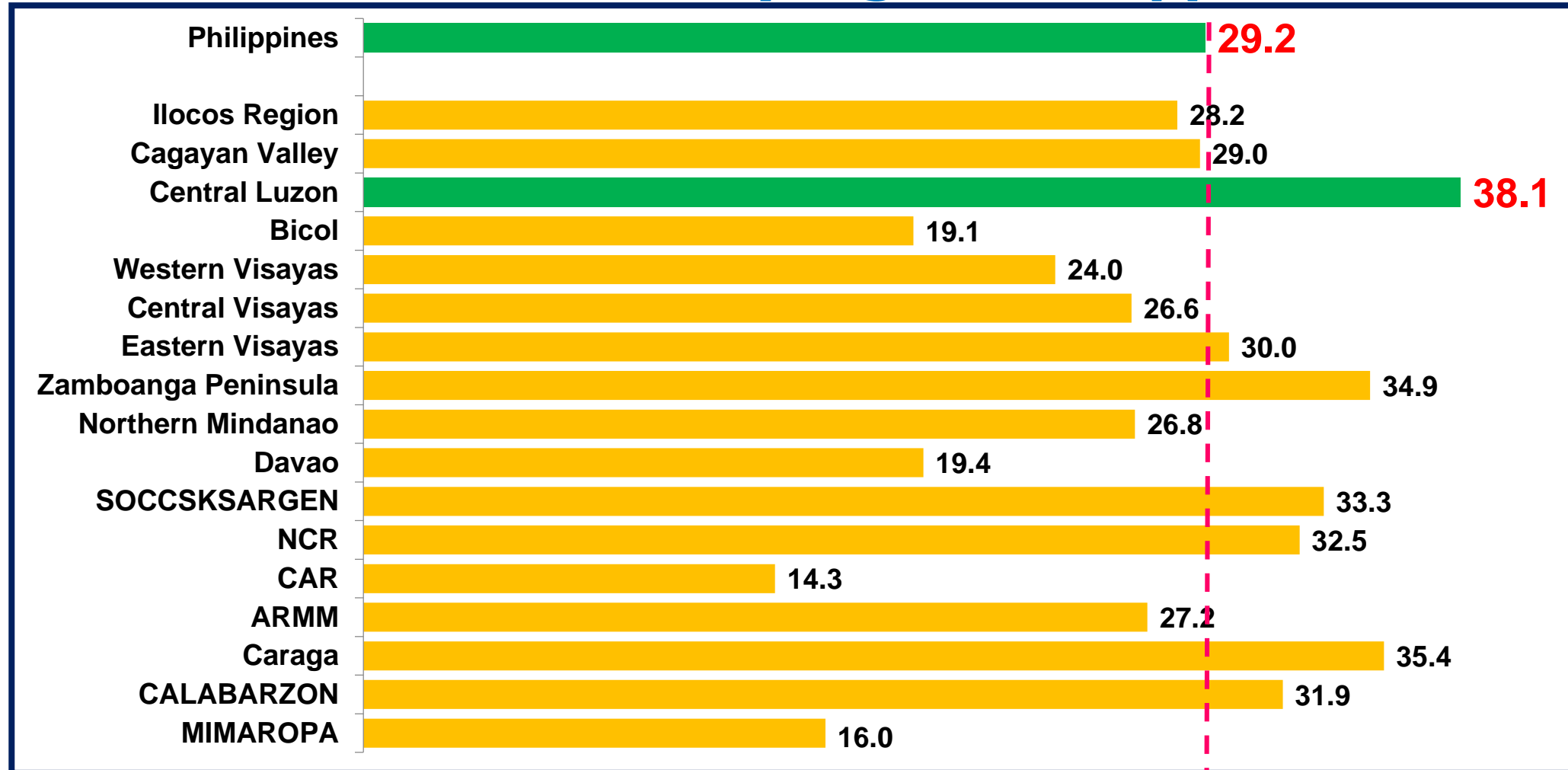
Percentage distribution of exclusively breastfed children 0-5 months by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



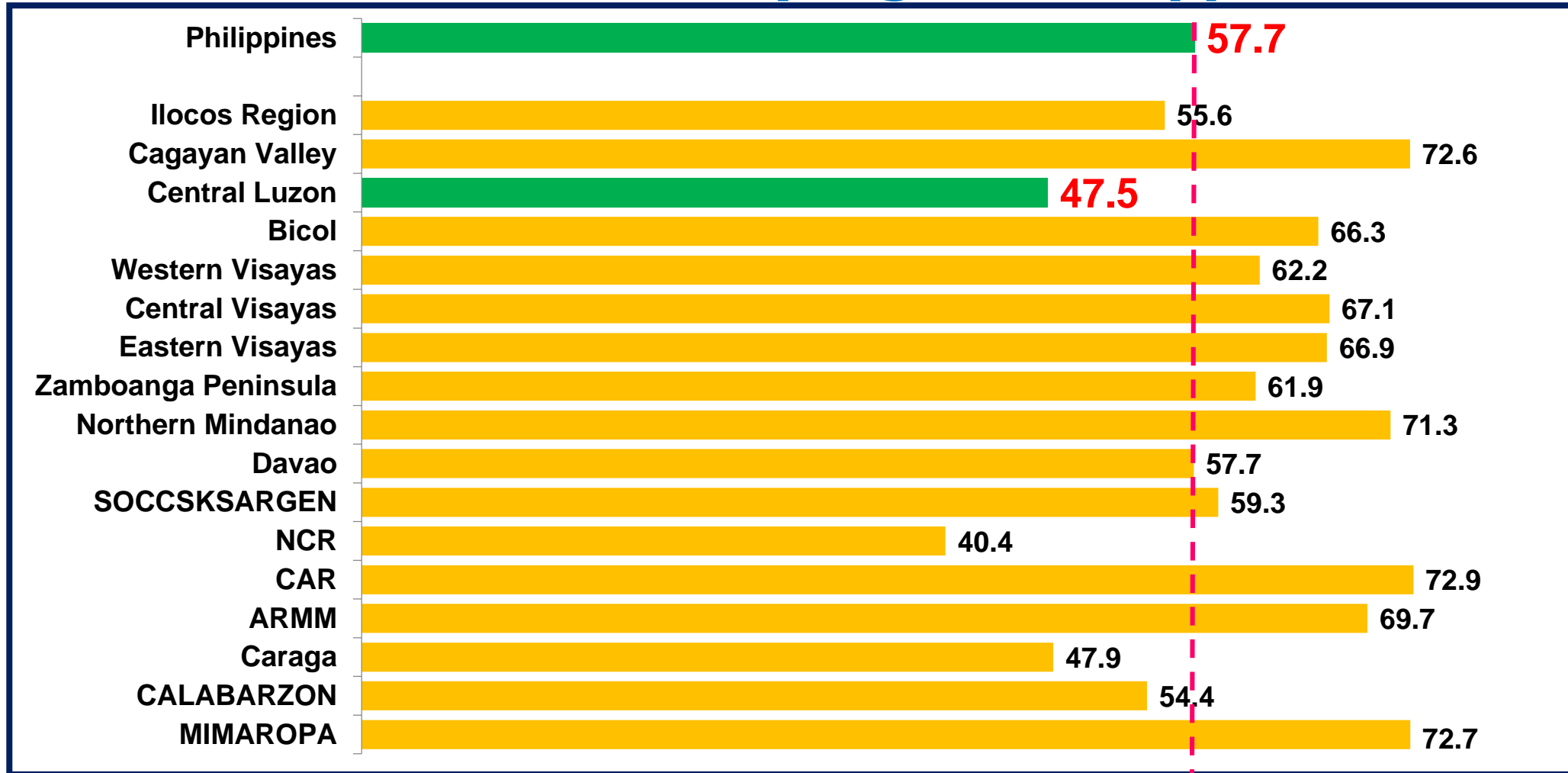
Percentage of breastfeeding with complementary feeding among 0-5 months children by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



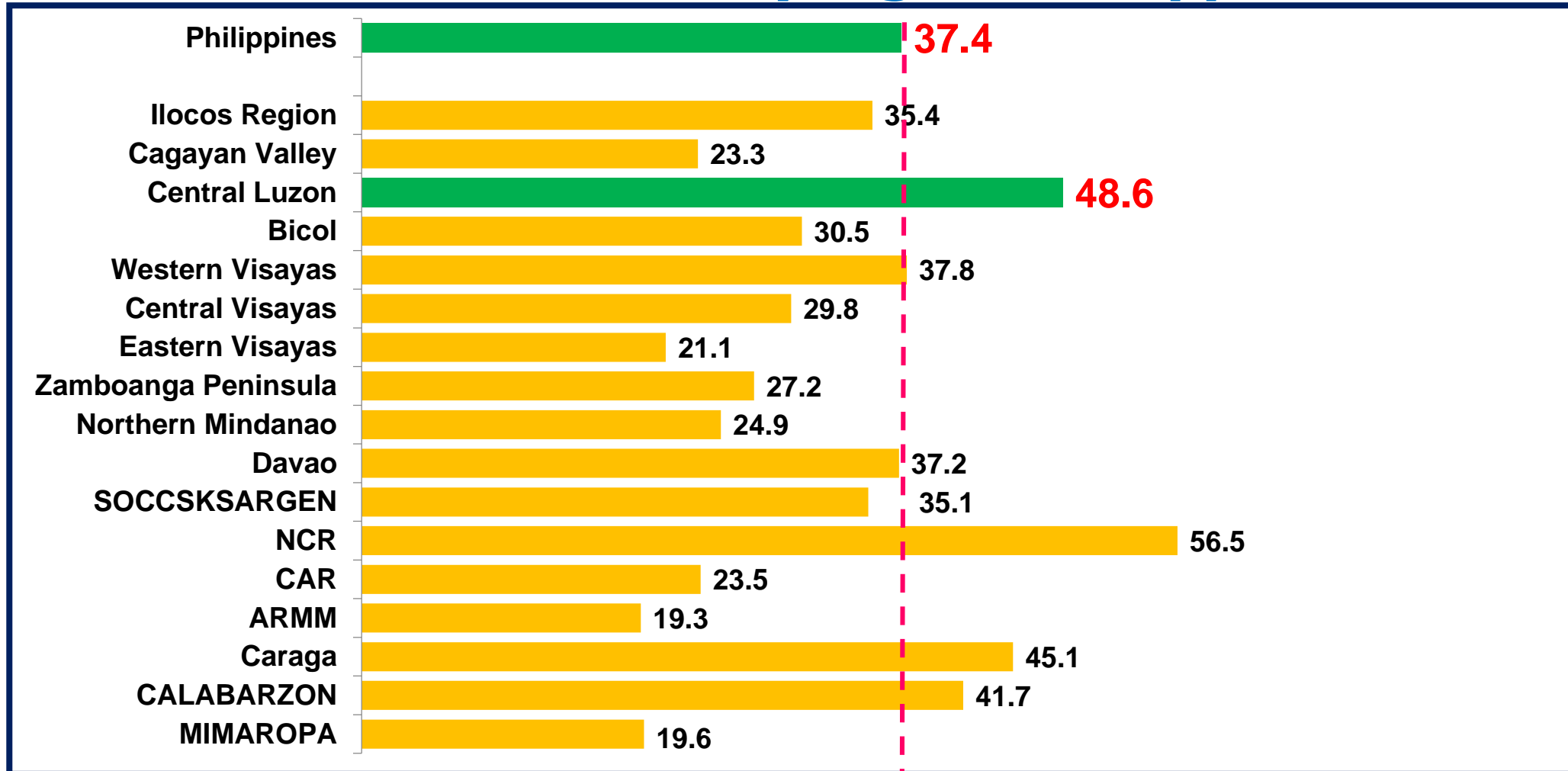
Percentage of breastfeeding with complementary feeding among 6-11 months children by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



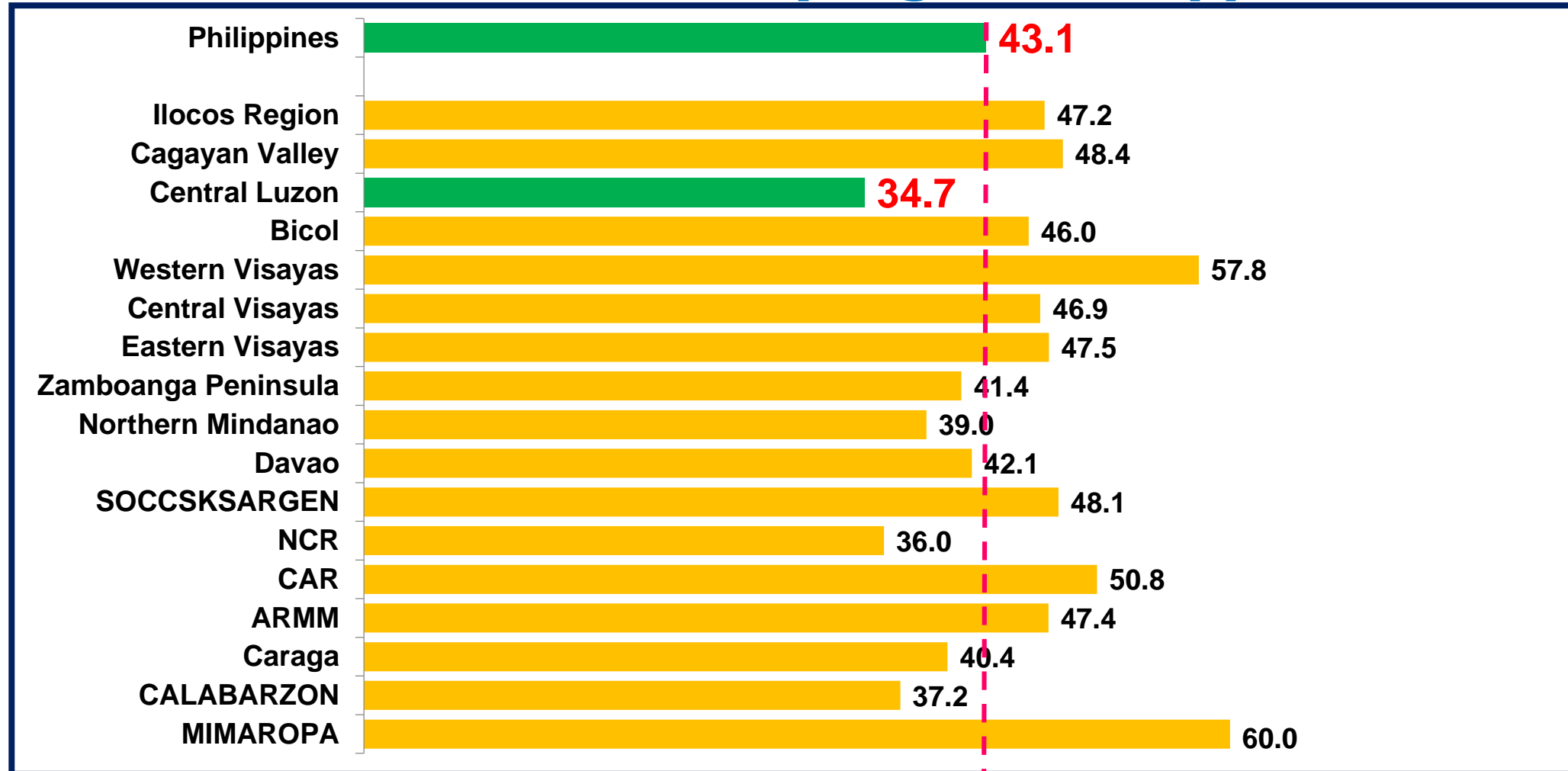
Percentage of feeding breastmilk substitutes with foods among 6-11 months children by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



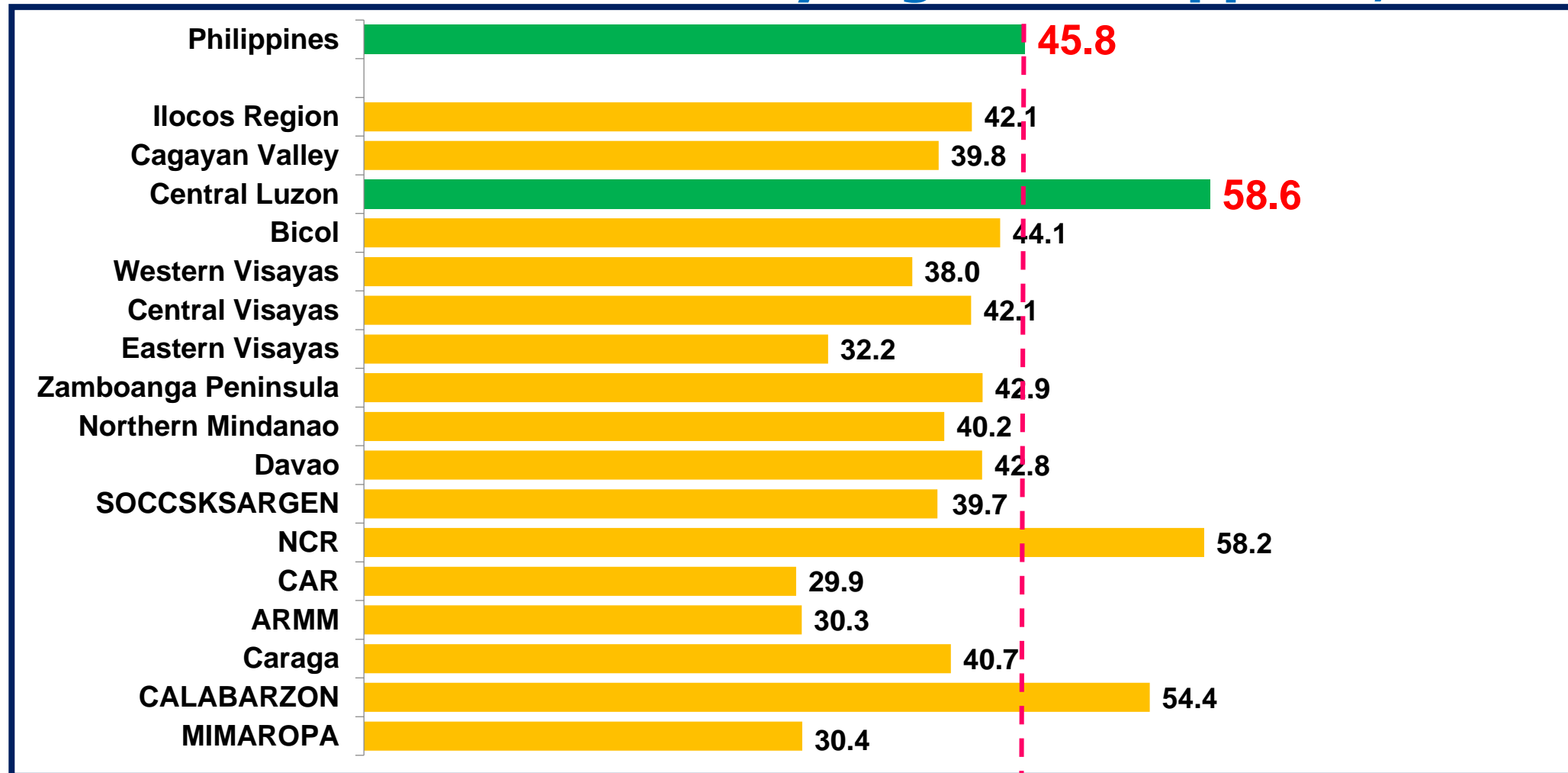
Percentage of breastfeeding with complementary feeding among 12-23 months children by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



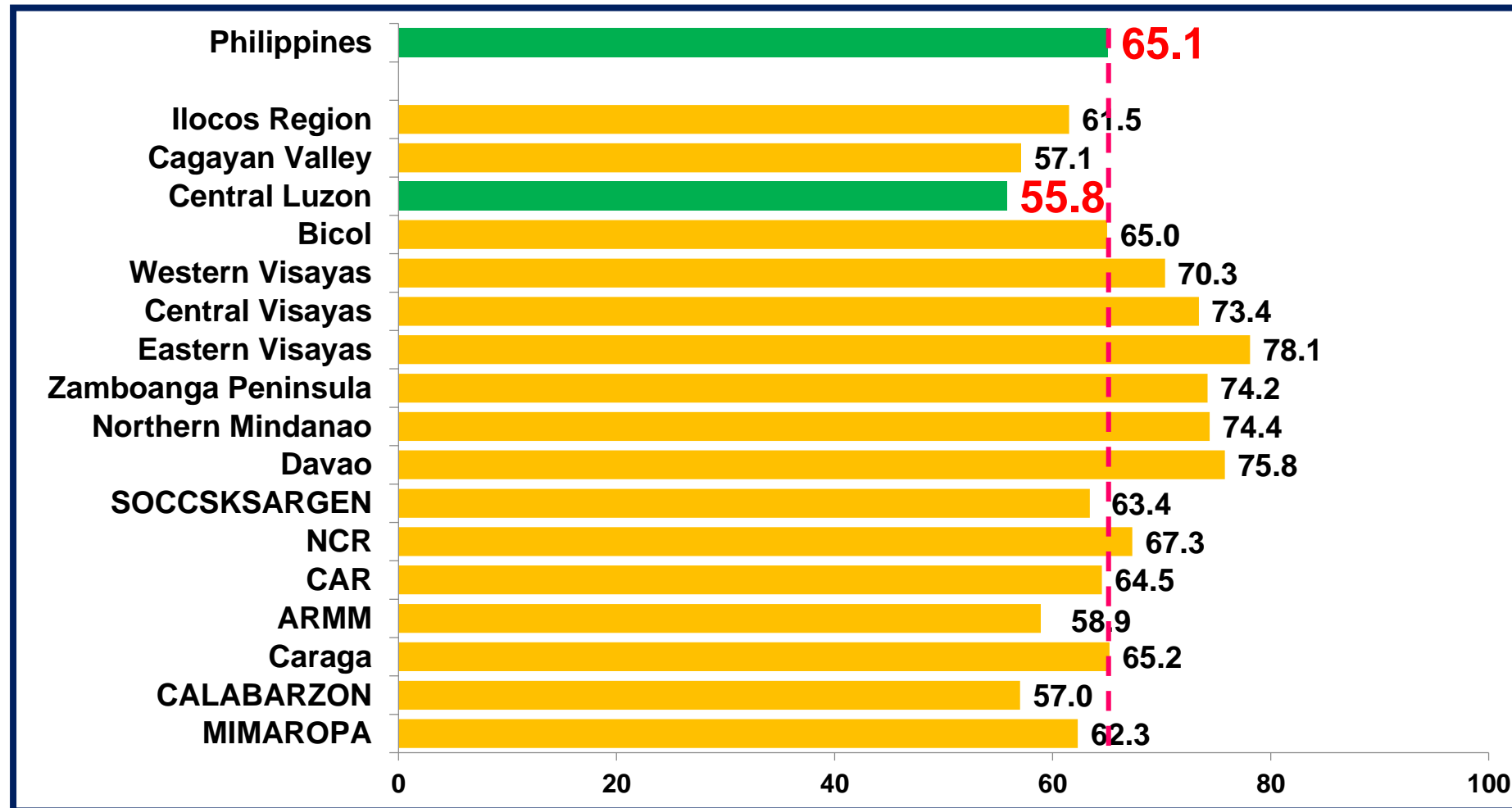
Percentage of feeding breastmilk substitutes with foods among 12-23 months children by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



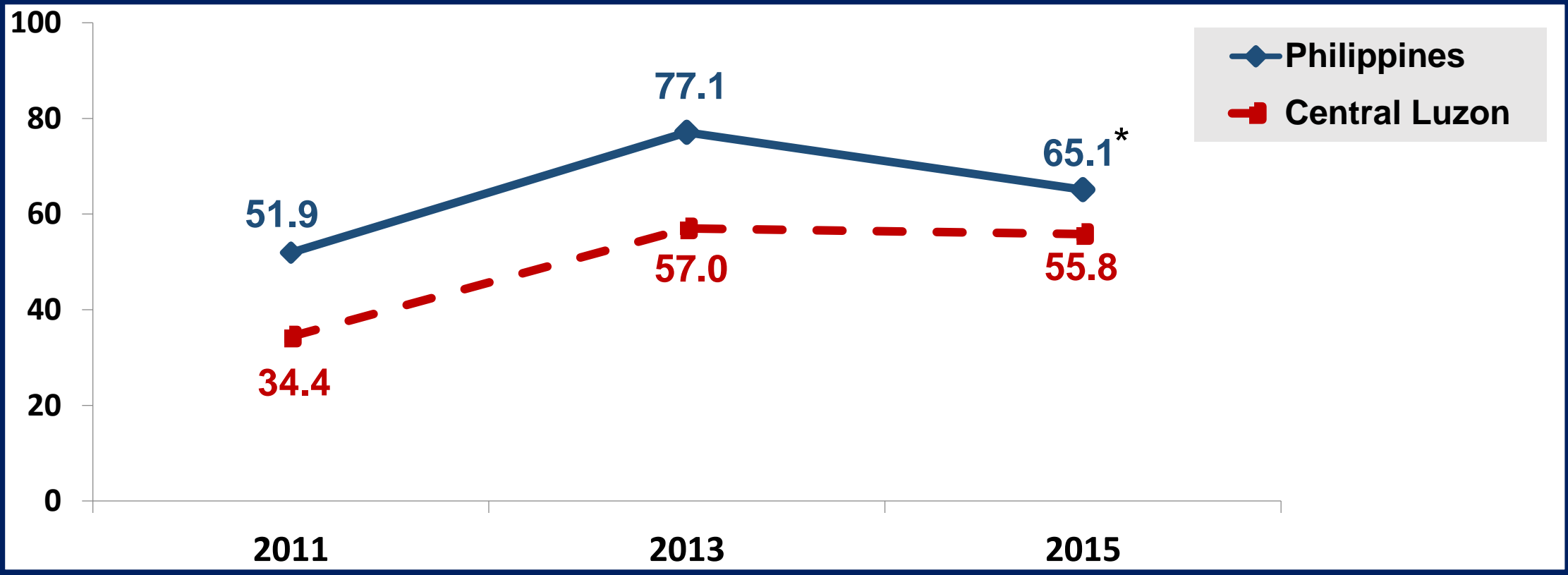
Percentage distribution of children 0-23 months initiated to breastfeeding within 1 hour after delivery by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children 0-23 months initiated to breastfeeding within 1 hour after delivery: Philippines & Central Luzon, 2011-2015



*Significant (p-value < 0.05)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of children 0-23 months initiated to breastfeeding within 1 hour after delivery: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|--------------------------|-------|----------------|----------------|--------------|
| Philippines | 5475 | 1.2 | 63.6 | 66.6 | 65.1 |
| Central Luzon | 414 | 5.3 | 49.9 | 61.4 | 55.8 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 12 | 20.7* | 37.1 | 86.7 | 66.3 |
| Bulacan | 117 | 9.3 | 46.9 | 67.7 | 57.6 |
| Nueva Ecija | 109 | 12.3 | 44.9 | 72.9 | 59.7 |
| Pampanga | 86 | 10.1 | 43.3 | 64.4 | 54.0 |
| Tarlac | 63 | 12.4 | 38.6 | 62.7 | 50.7 |
| Zambales | 19 | 21.5* | 25.6 | 59.2 | 41.4 |

*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



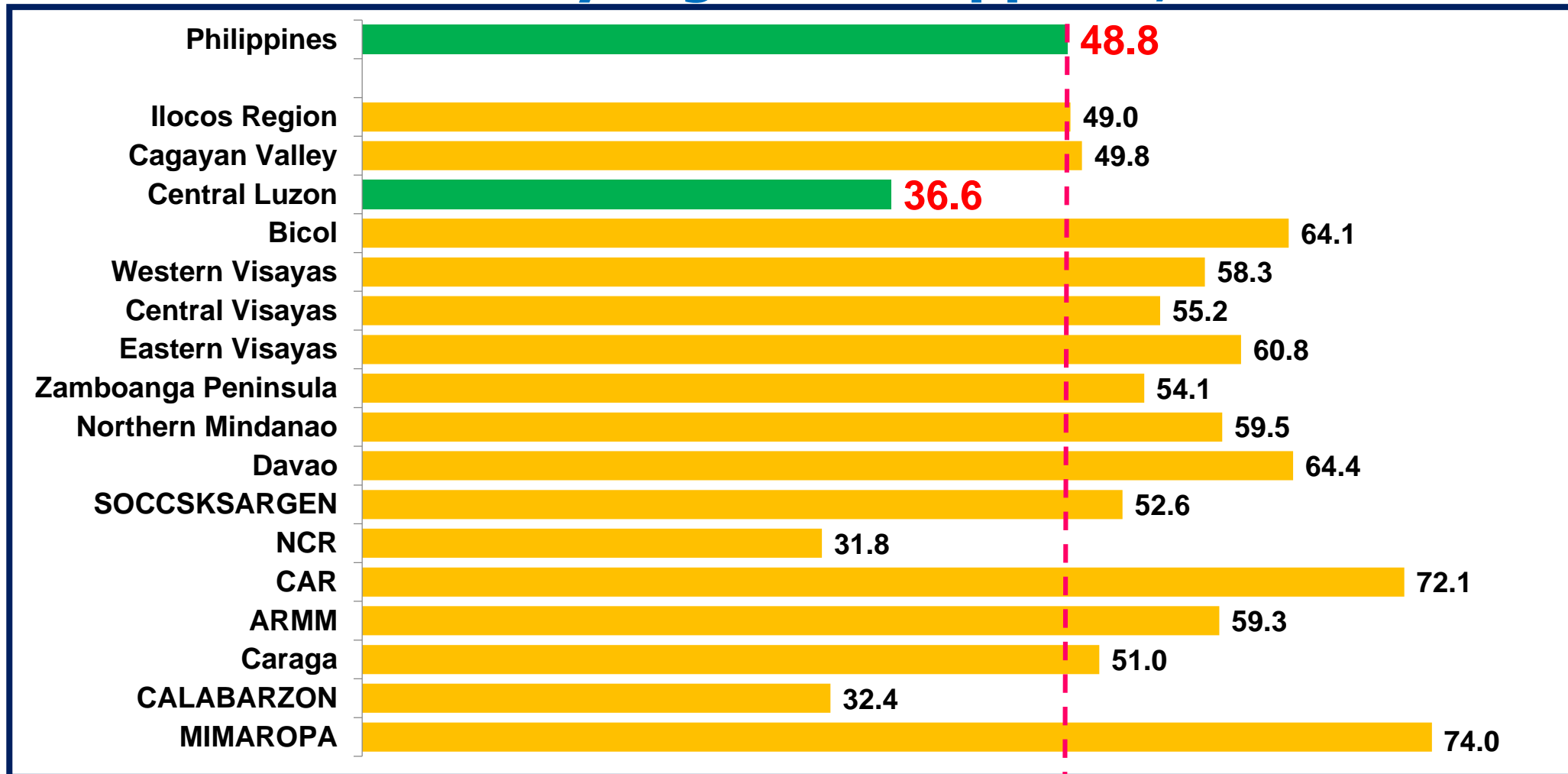
Exclusive Breastfeeding



Department of Science and Technology
Food and Nutrition Research Institute



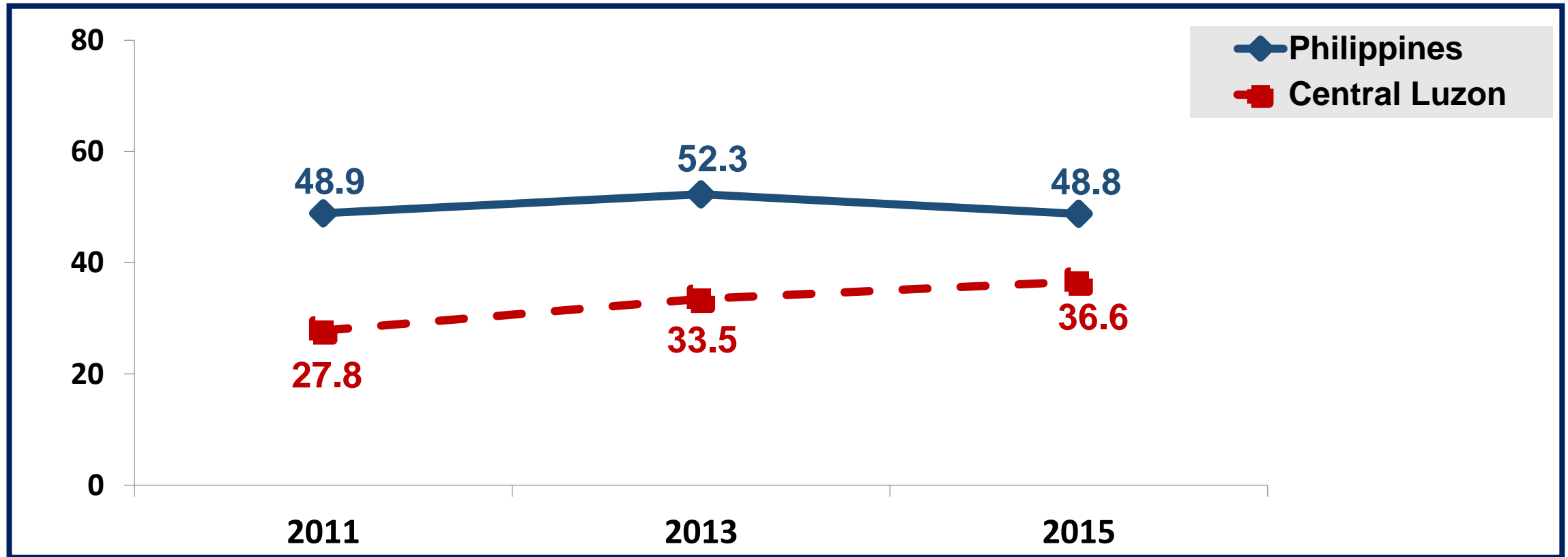
Percentage distribution of exclusively breastfed children 0-5 months by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute








Trends of exclusively breastfed children 0-5 months: Philippines & Central Luzon, 2011-2015



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of exclusive breastfeeding among 0-5 months children: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|------|-------|--------------------------|----------------|---|------|
| Philippines | 1377 | 3.0 | 46.0 | 51.7 |  | 48.8 |
| Central Luzon | 113 | 11.2 | 29.0 | 45.0 |  | 36.6 |
| Aurora | | | Insufficient sample size | | | |
| Bataan | | | Insufficient sample size | | | |
| Bulacan | 37 | 24.7* | 17.3 | 45.1 |  | 29.3 |
| Nueva Ecija | 30 | 16.2 | 38.5 | 73.0 |  | 56.6 |
| Pampanga | 29 | 40.8* | 11.1 | 52.9 |  | 27.2 |
| Tarlac | | | Insufficient sample size | | | |
| Zambales | | | Insufficient sample size | | | |

*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



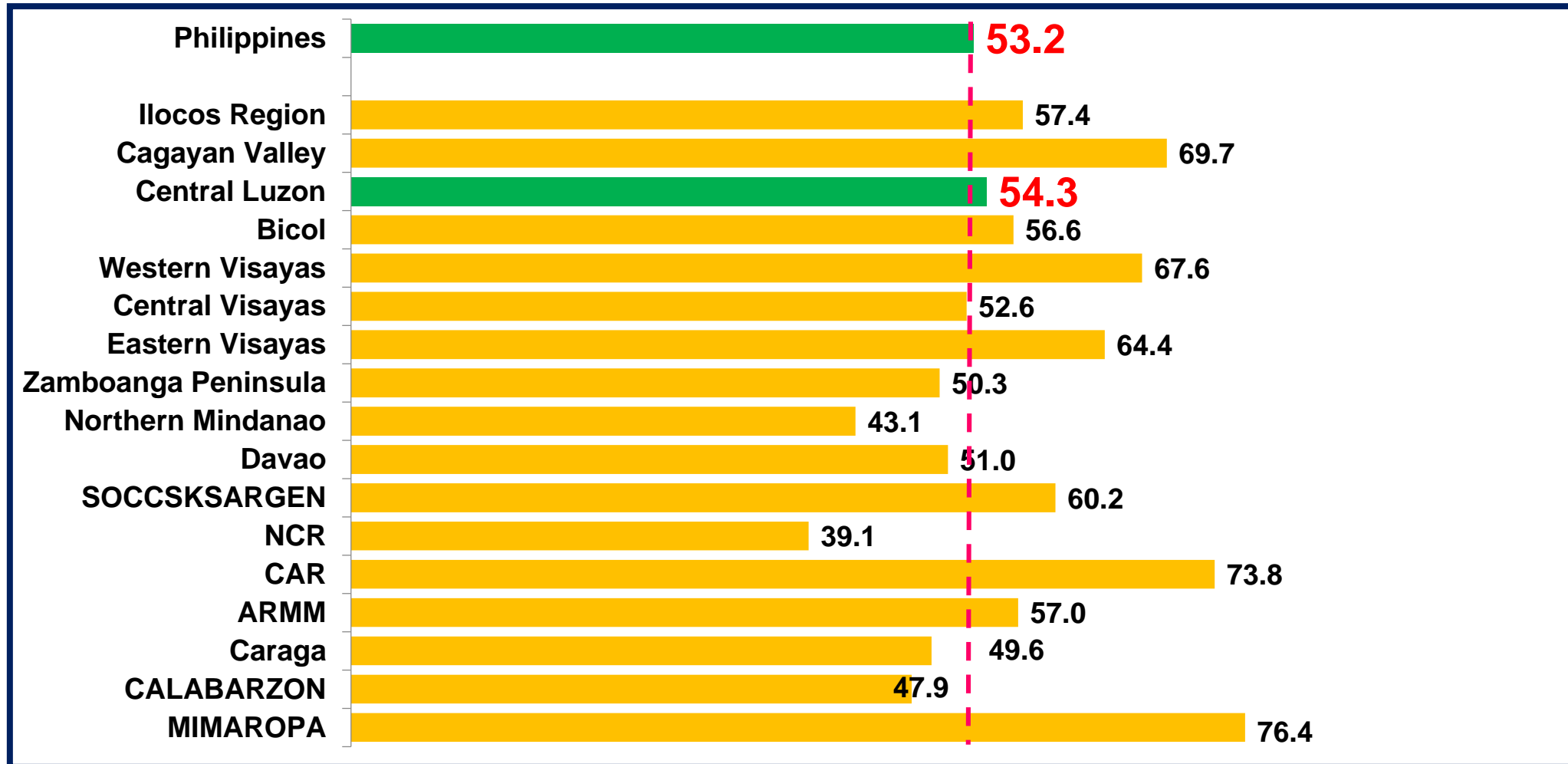
Continued breastfeeding at 1 year (12-15 months) and 2 years (20-23 months)



Department of Science and Technology
Food and Nutrition Research Institute



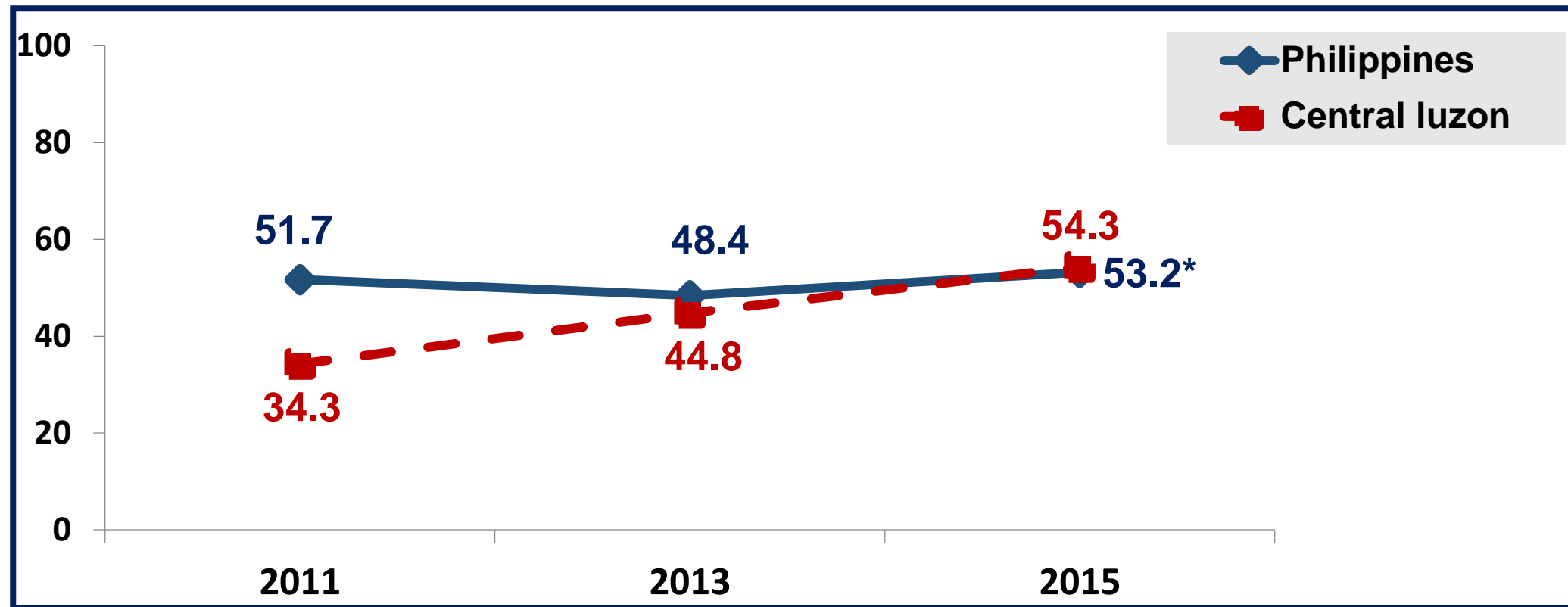
Percentage distribution of children with continued breastfeeding at 1 year (12-15 months) by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children with continued breastfeeding at 1 year (12-15 months): Philippines & Central Luzon, 2011-2015



*Significant (p-value < 0.05)



Department of Science and Technology
Food and Nutrition Research Institute



Continued breastfeeding at 1 year (12-15 months): Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|------|-------|--------------------------|----------------|--------------|------|
| Philippines | 1047 | 3.1 | 50.0 | 56.4 | <div></div> | 53.2 |
| Central Luzon | 75 | 7.7 | 46.0 | 62.4 | <div></div> | 54.3 |
| Aurora | | | Insufficient sample size | | | |
| Bataan | | | Insufficient sample size | | | |
| Bulacan | 21 | 14.1 | 34.3 | 59.6 | <div></div> | 46.7 |
| Nueva Ecija | 17 | 24.6* | 28.3 | 74.7 | <div></div> | 51.9 |
| Pampanga | 19 | 20.5* | 29.2 | 65.2 | <div></div> | 46.8 |
| Tarlac | 10 | 4.8 | 63.4 | 76.7 | <div></div> | 70.4 |
| Zambales | | | Insufficient sample size | | | |

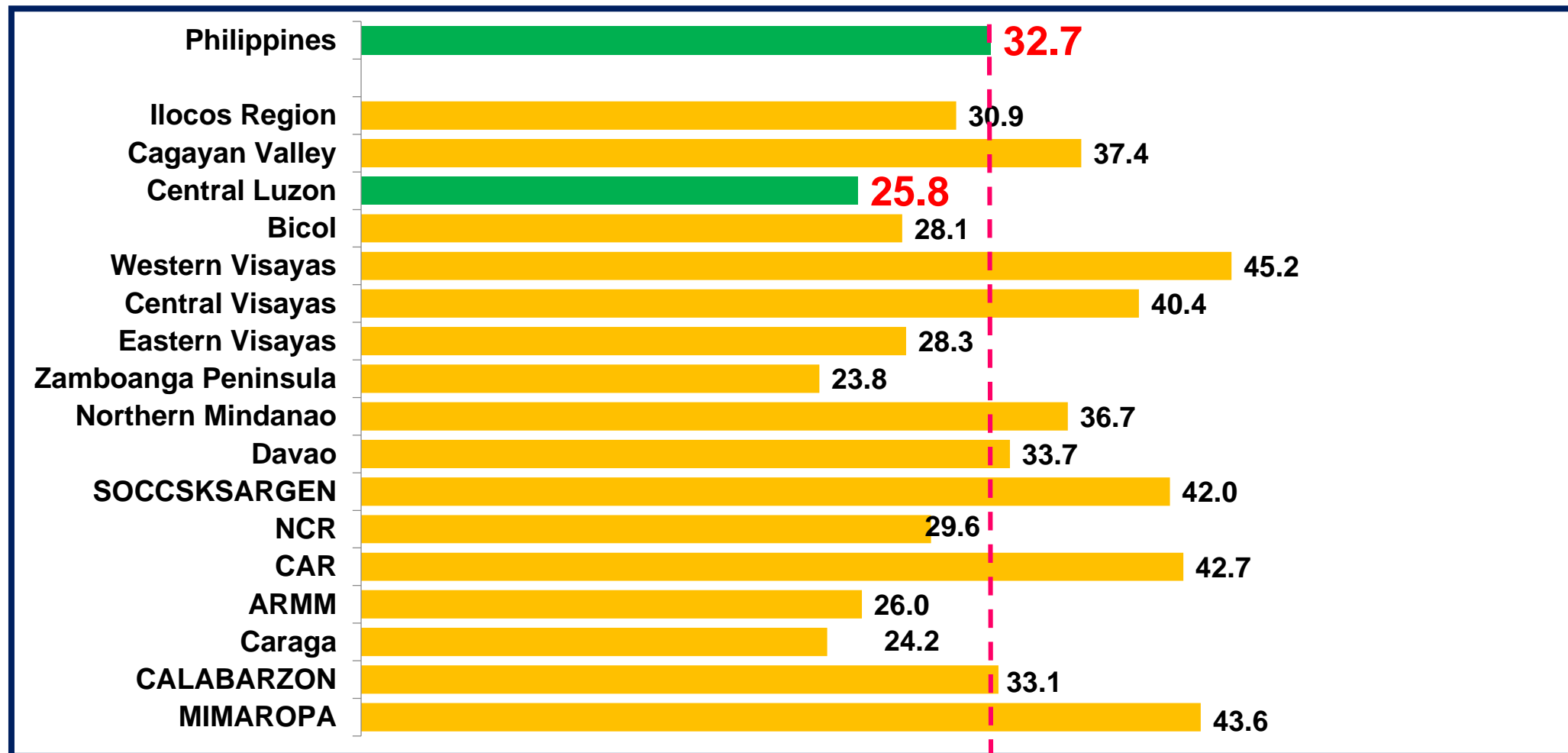
*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



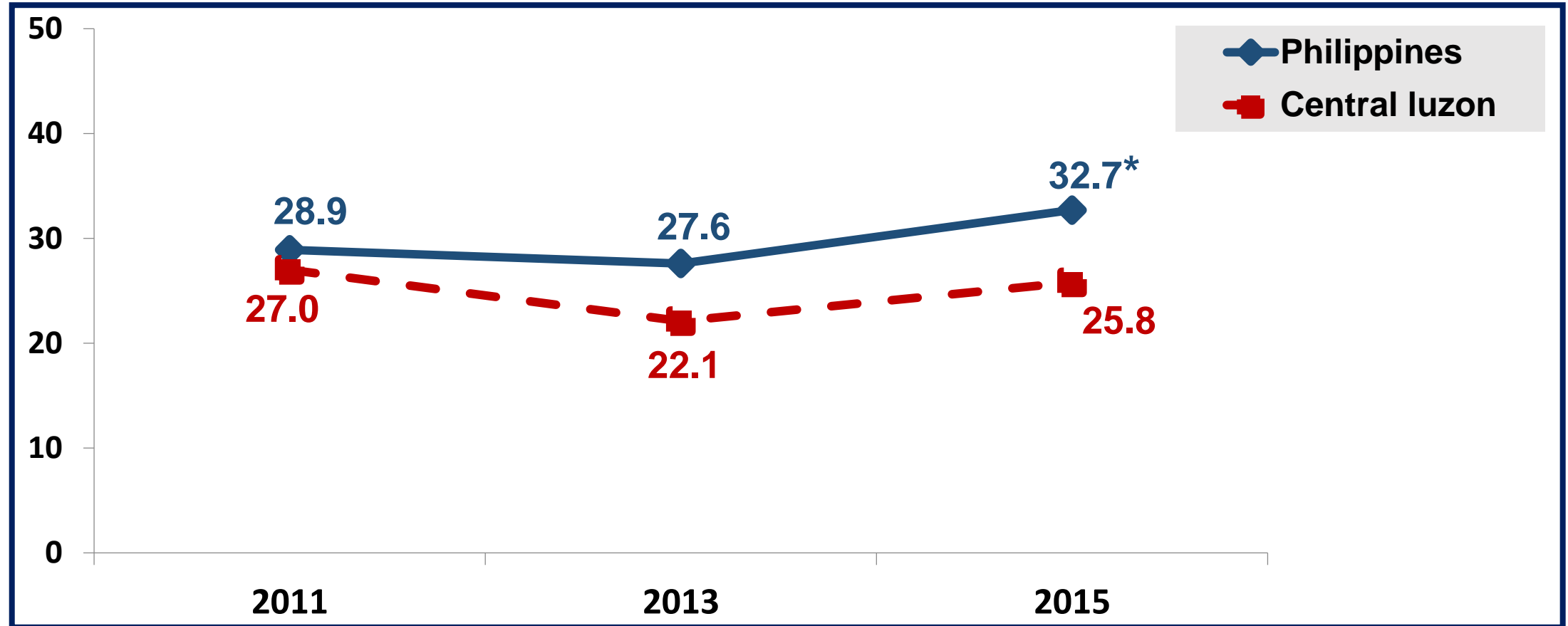
Percentage distribution of children with continued breastfeeding at 2 years (20-23 months) by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children with continued breastfeeding at 2 years (20-23 months): Philippines & Central Luzon 2011-2015



*Significant (p-value < 0.05)



Department of Science and Technology
Food and Nutrition Research Institute



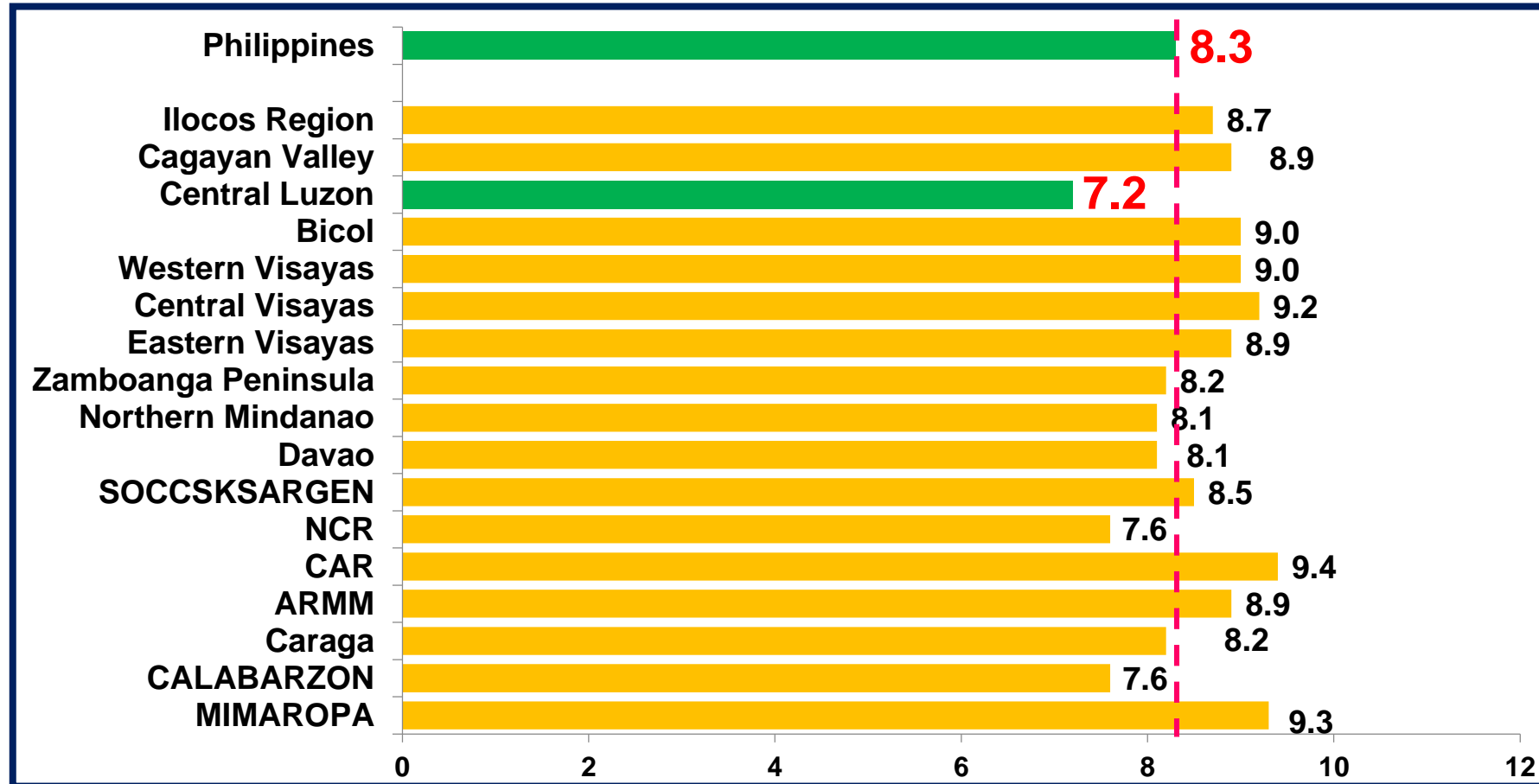
Duration of Breastfeeding



Department of Science and Technology
Food and Nutrition Research Institute



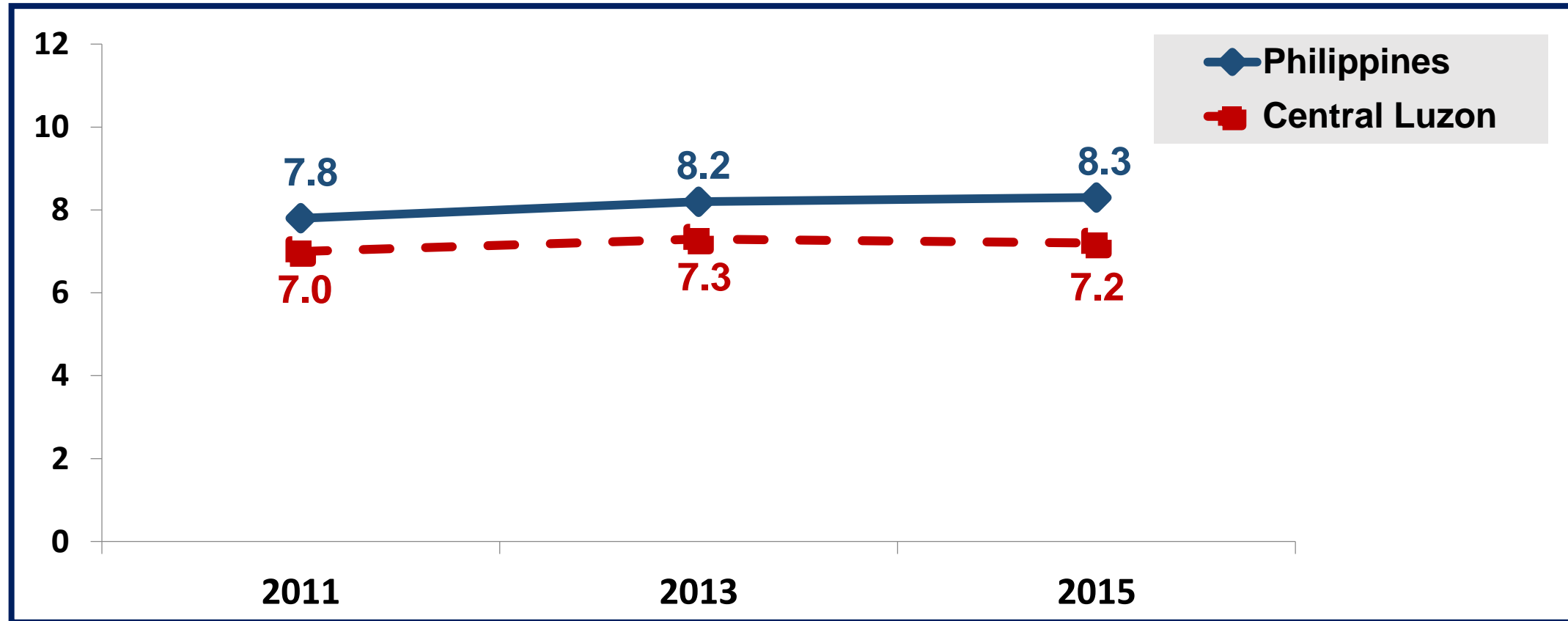
Mean duration (in months) of breastfeeding by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of mean duration (in months) of breastfeeding: Philippines & Central Luzon, 2011-2015



Department of Science and Technology
Food and Nutrition Research Institute



Mean duration (in months) of breastfeeding: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | Duration in months |
|---------------------|--------------------------|-------|----------------|----------------|--------------------|
| Philippines | 5269 | 1.1 | 8.1 | 8.5 | 8.3 |
| Central Luzon | 375 | 4.4 | 6.5 | 7.8 | 7.2 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 11 | 22.7* | 5.3 | 13.9 | 9.6 |
| Bulacan | 110 | 7.9 | 5.0 | 6.9 | 6.0 |
| Nueva Ecija | 107 | 8.2 | 6.3 | 8.7 | 7.5 |
| Pampanga | 64 | 12.9 | 4.7 | 7.8 | 6.2 |
| Tarlac | 59 | 11.6 | 6.7 | 10.7 | 8.7 |
| Zambales | 17 | 21.4* | 5.1 | 12.4 | 8.7 |

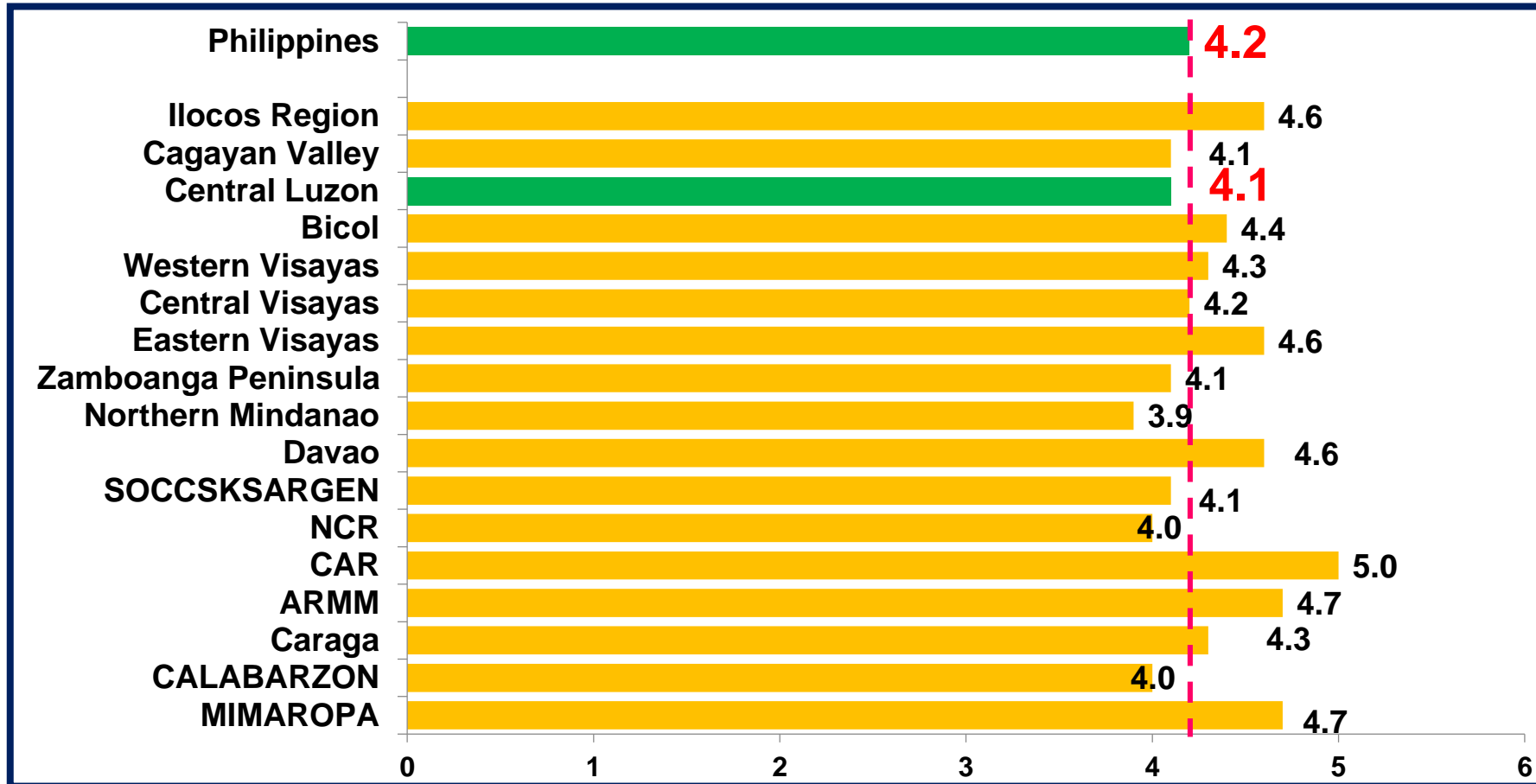
*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



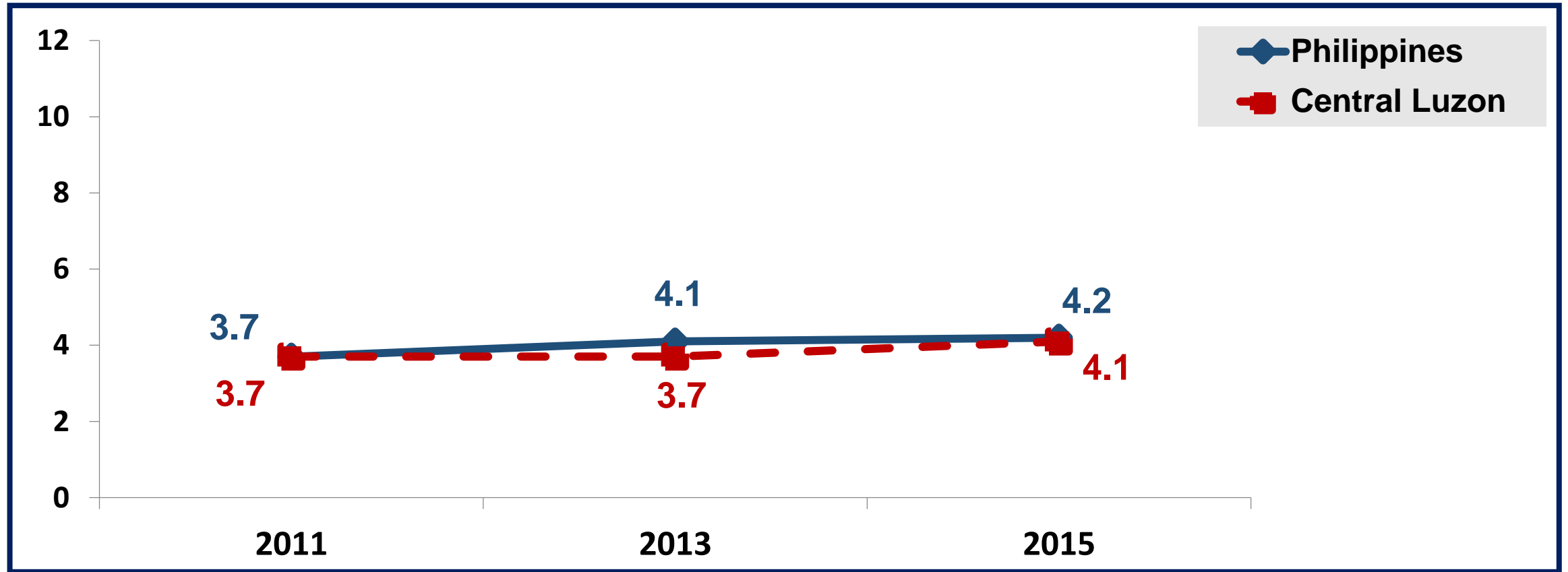
Mean duration (in months) of exclusive breastfeeding by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of mean duration (in months) of exclusive breastfeeding: Philippines & Central Luzon, 2011-2015



Department of Science and Technology
Food and Nutrition Research Institute



Mean duration (in months) of exclusive breastfeeding: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | Duration in months |
|---------------------|------|------|--------------------------|----------------|--------------------|
| Philippines | 4522 | 1.2 | 4.1 | 4.3 | 4.2 |
| Central Luzon | 282 | 5.6 | 3.6 | 4.5 | 4.1 |
| Aurora | | | Insufficient sample size | | |
| Bataan | | | Insufficient sample size | | |
| Bulacan | 77 | 7.1 | 3.5 | 4.6 | 4.0 |
| Nueva Ecija | 80 | 9.1 | 3.4 | 4.9 | 4.2 |
| Pampanga | 51 | 15.2 | 2.2 | 4.2 | 3.2 |
| Tarlac | 44 | 13.7 | 3.5 | 6.0 | 4.7 |
| Zambales | 15 | 14.5 | 3.2 | 5.8 | 4.5 |





Complementary Feeding



Department of Science and Technology
Food and Nutrition Research Institute



MINIMUM DIETARY DIVERSITY

Dietary Diversity Score:

The number of food groups consumed by children 6-23 months.

Minimum Dietary Diversity Score:

Proportion of children 6-23 months of age who receive foods from at least 4 food groups (DDS > 4).



Department of Science and Technology
Food and Nutrition Research Institute



The Seven Food Groups

1. Grains, roots and tubers



3. Vitamin A rich fruits & vegetables



6. Flesh Meat



2. Dairy Products



4. Other fruits & vegetables



5. Eggs



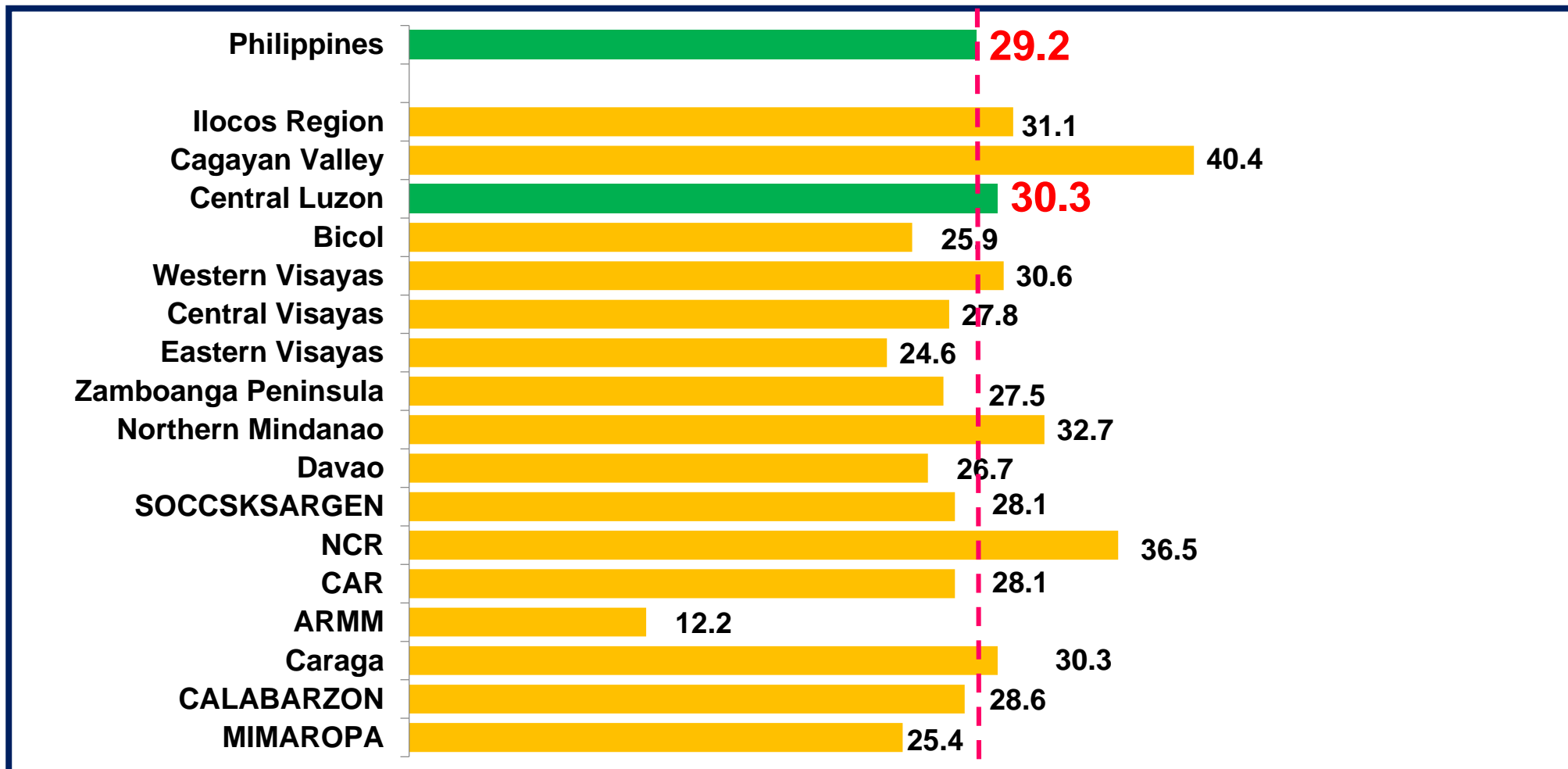
7. Legumes and Nuts



Department of Science and Technology
Food and Nutrition Research Institute



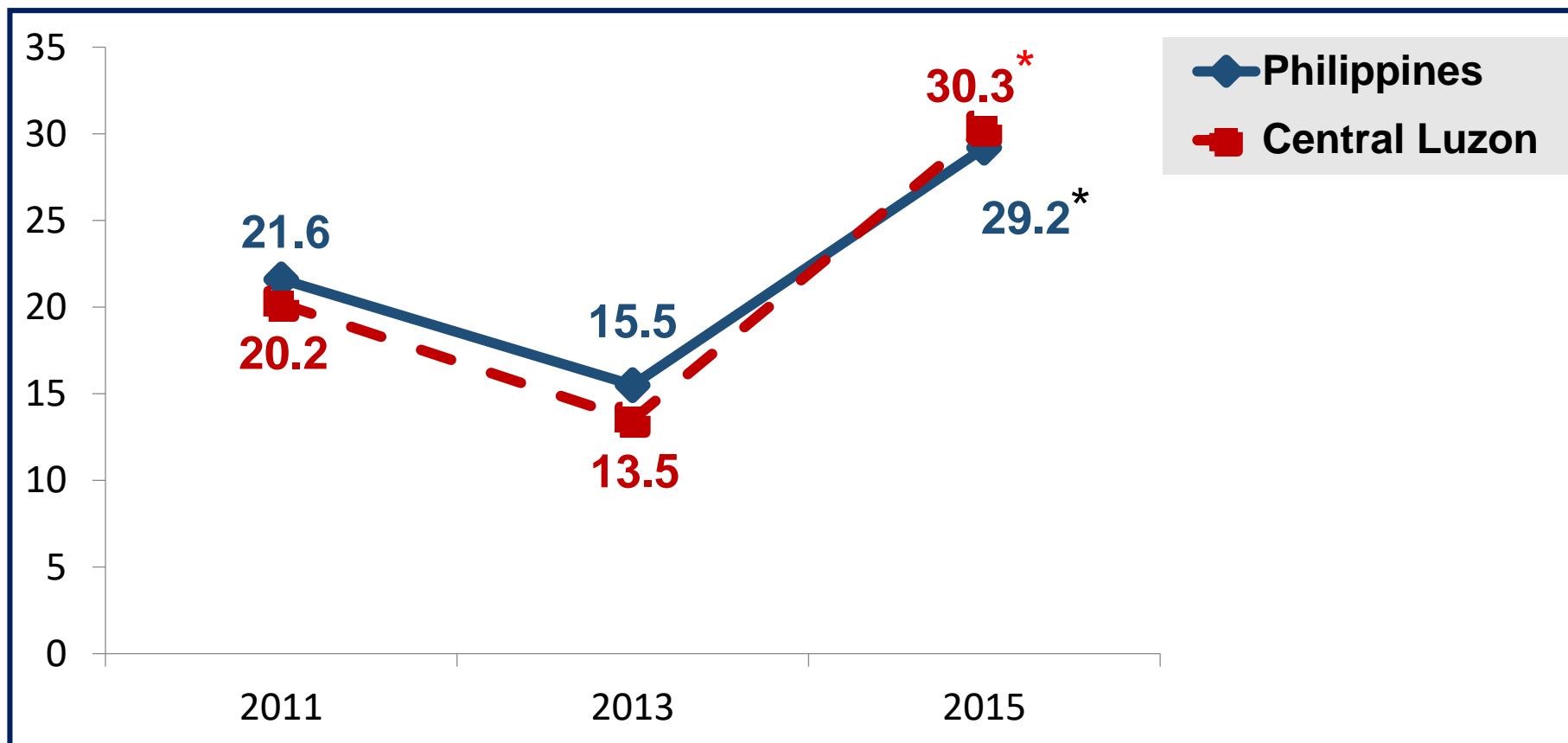
Percentage distribution of all children meeting the MDD by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children 6-23 months meeting the Minimum Dietary Diversity (MDD): Philippines & Central Luzon, 2011-2015



*Significant (p-value < 0.05)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of children 6-23 months meeting Minimum Dietary Diversity (MDD): Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|--------------------------|-------|----------------|----------------|--------------|
| Philippines | 4765 | 2.7 | 27.6 | 30.7 | 29.2 |
| Central Luzon | 359 | 8.3 | 25.6 | 35.5 | 30.3 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 10 | 71.7* | 4.1 | 58.3 | 19.6 |
| Bulacan | 98 | 16.8 | 21.9 | 42.2 | 31.2 |
| Nueva Ecija | 100 | 13.5 | 22.6 | 38.3 | 29.9 |
| Pampanga | 67 | 19.0 | 19.2 | 40.4 | 28.6 |
| Tarlac | 63 | 19.8 | 22.5 | 48.7 | 34.4 |
| Zambales | 16 | 54.2* | 5.9 | 46.6 | 19.0 |

*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



Minimum Meal Frequency

Minimum Meal Frequency:

an indicator that reflects the energy intake from foods other than breastmilk

Proportion of breastfed and non-breastfed children 6-23 months who received solid, semi-solid, or soft foods consumed at the minimum number of times per day

Defined as:

2x for breastfed infants 6-8 months old

3x for breastfed children 9-23 months old

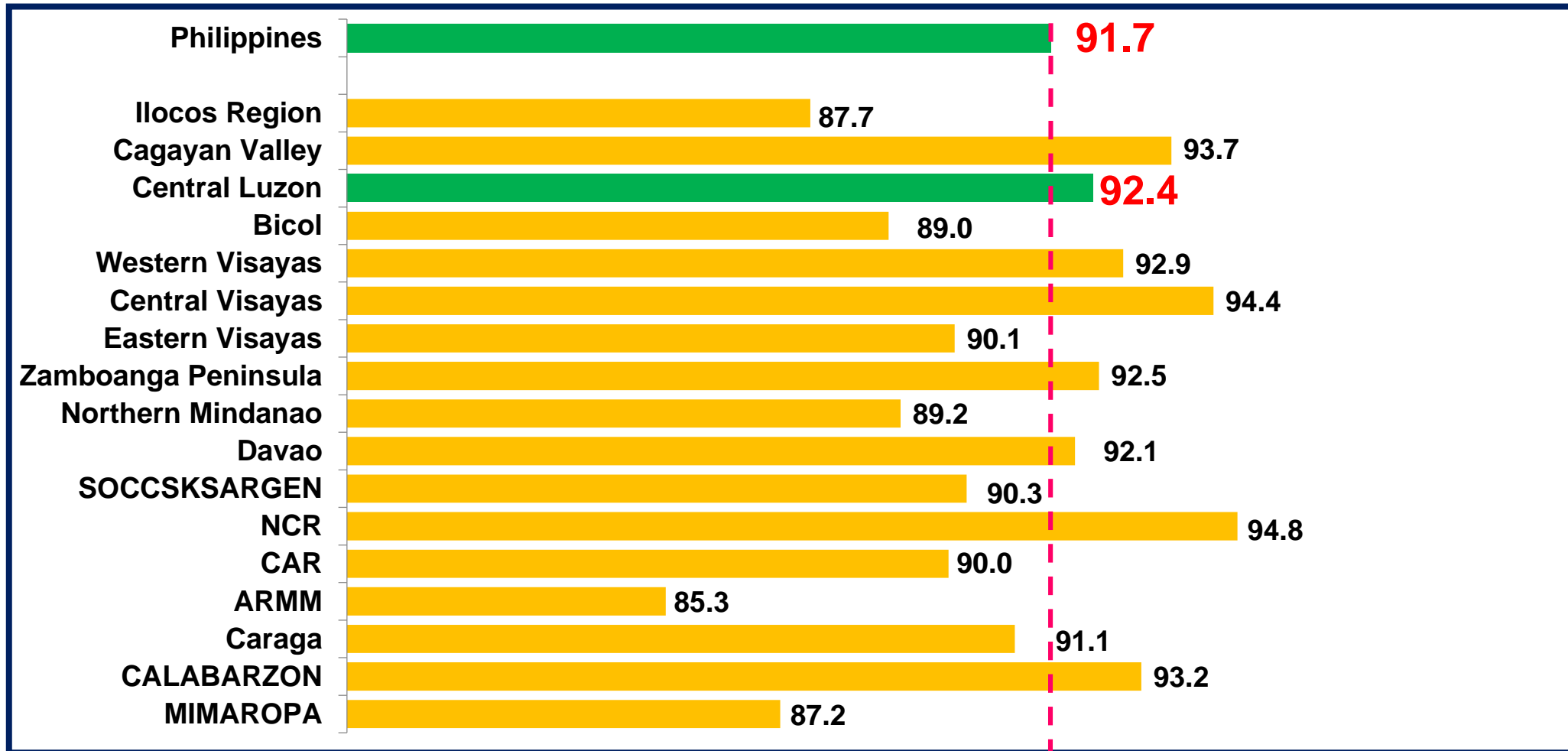
4x for non-breastfed children 6-23 months old



Department of Science and Technology
Food and Nutrition Research Institute



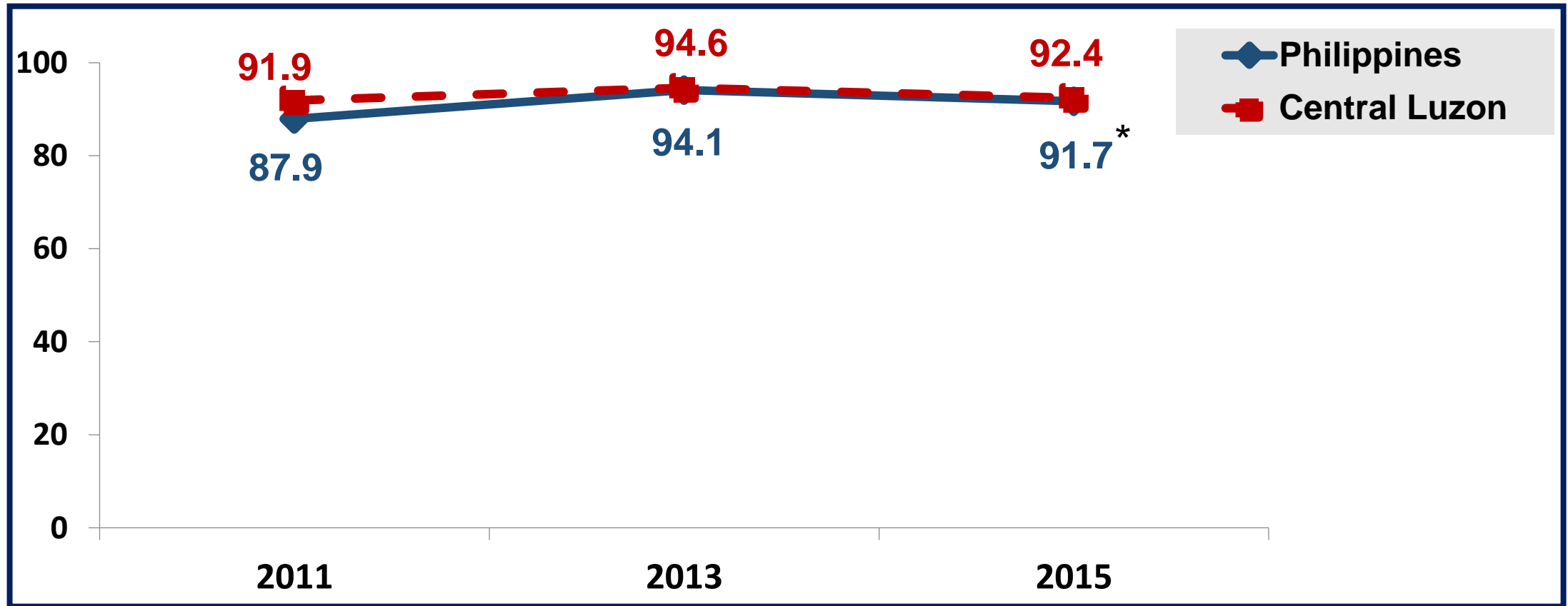
Percentage of all children 6-23 months meeting the MMF by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children 6-23 months meeting the Minimum Meal Frequency (MMF): Philippines & Central Luzon, 2011-2015



*Significant (p-value < 0.05)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of children 6-23 months meeting the Minimum Meal Frequency (MMF): Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|--------------------------|------|----------------|----------------|--------------|
| Philippines | 4732 | 0.5 | 90.8 | 92.5 | 91.7 |
| Central Luzon | 358 | 1.6 | 88.9 | 94.8 | 92.4 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 10 | 10.6 | 54.6 | 98.3 | 89.3 |
| Bulacan | 98 | 2.2 | 88.7 | 99.3 | 97.0 |
| Nueva Ecija | 99 | 3.2 | 82.5 | 94.2 | 89.7 |
| Pampanga | 67 | 3.0 | 85.3 | 97.6 | 93.9 |
| Tarlac | 63 | 5.5 | 75.3 | 96.6 | 90.3 |
| Zambales | 16 | 8.7 | 64.0 | 96.6 | 87.7 |



Department of Science and Technology
Food and Nutrition Research Institute



Minimum Acceptable Diet

*Minimum
Acceptable
Diet:*

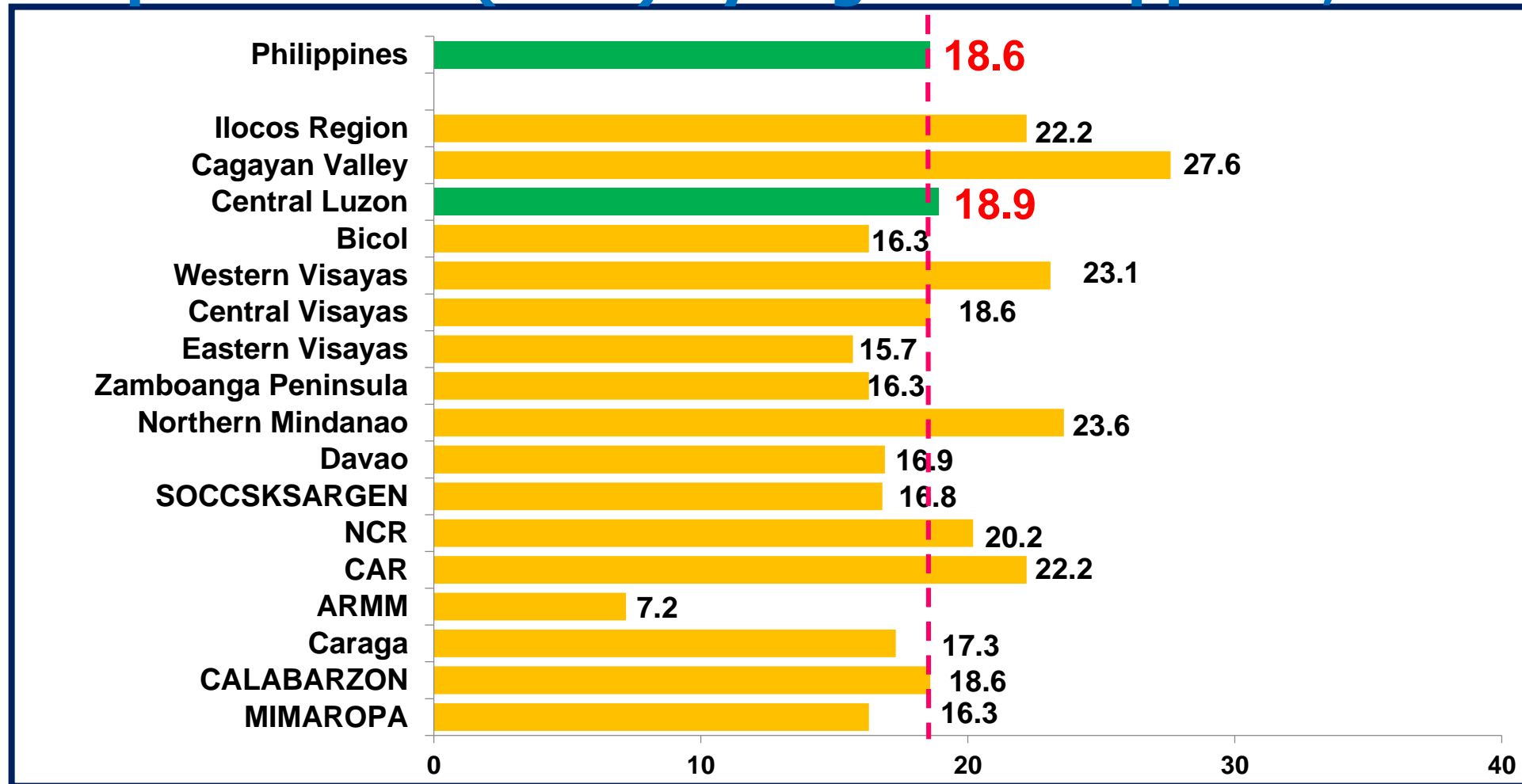
Proportion of children 6-23 months meeting both the minimum dietary diversity and the minimum meal frequency.



Department of Science and Technology
Food and Nutrition Research Institute



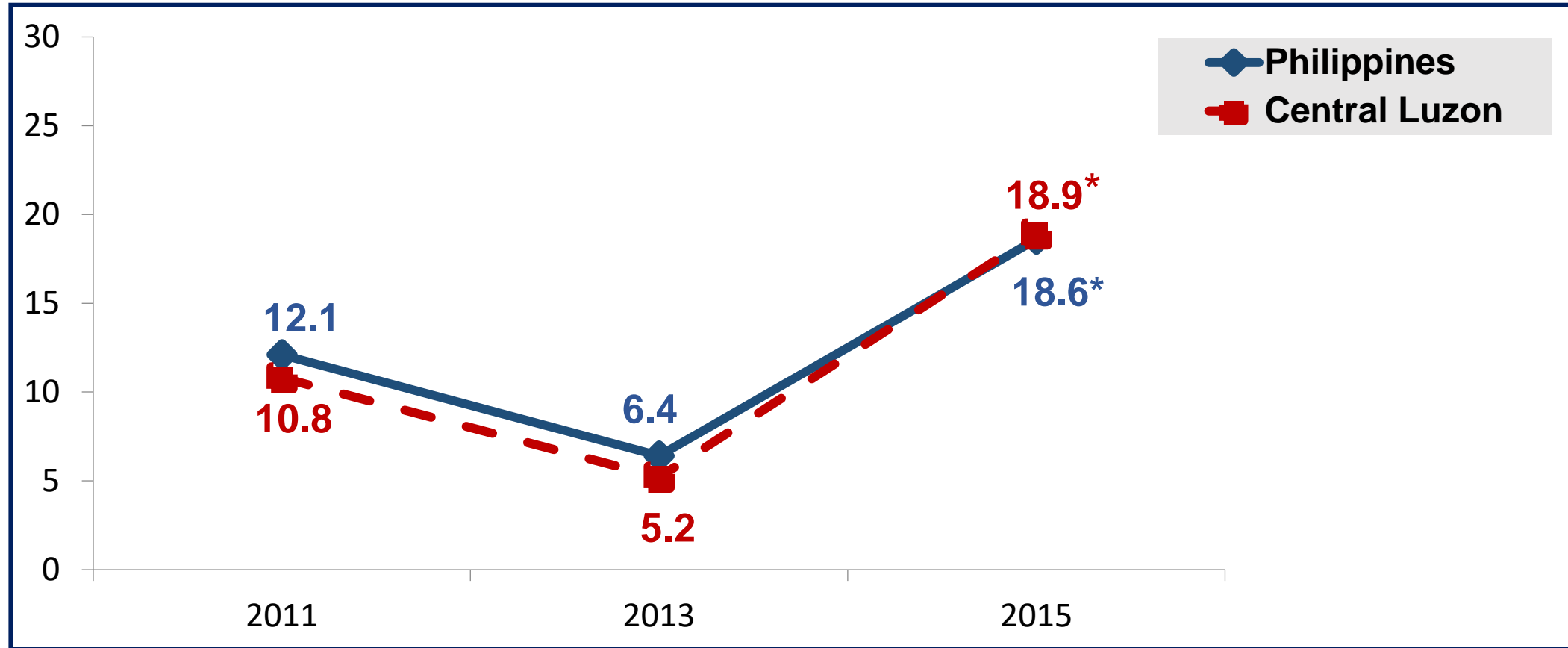
Percentage of children 6-23 months meeting the Minimum Acceptable Diet (MAD) by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Trends of children 6-23 months meeting the Minimum Acceptable Diet (MAD): Philippines & Central Luzon, 2011-2015



*Significant (p-value < 0.05)



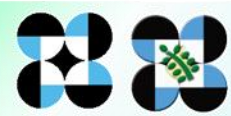
Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of **mothers with on time (1st trimester) first prenatal check-up** during their last/current pregnancy: Philippines and Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|------|-------|----------------|----------------|--------------|------|
| Philippines | 8007 | 0.9 | 68.3 | 70.7 | | 69.5 |
| Central Luzon | 630 | 3.4 | 65.6 | 75.0 | | 70.5 |
| Aurora | 11 | 70.0* | 6.4 | 88.0 | | 41.4 |
| Bataan | 20 | 9.3 | 62.1 | 91.8 | | 81.1 |
| Bulacan | 183 | 5.4 | 69.3 | 86.0 | | 78.8 |
| Nueva Ecija | 159 | 9.0 | 49.6 | 70.6 | | 60.6 |
| Pampanga | 139 | 7.3 | 56.5 | 75.3 | | 66.6 |
| Tarlac | 92 | 6.4 | 67.3 | 87.0 | | 78.8 |
| Zambales | 26 | 12.8 | 48.2 | 80.3 | | 66.1 |

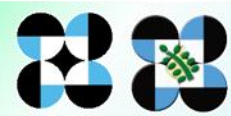
*High CV (>20.0)



Percentage distribution of **mothers who took supplements** during their last/ current pregnancy: Philippines and Central Luzon, 2015

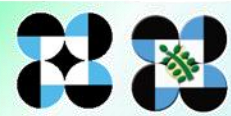
| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|------|------|----------------|----------------|--------------|------|
| Philippines | 8526 | 0.6 | 83.4 | 85.4 | | 84.5 |
| Central Luzon | 661 | 2.0 | 81.1 | 87.8 | | 84.8 |
| Aurora | 11 | 28.7 | 24.8 | 96.0 | | 73.7 |
| Bataan | 20 | 7.4 | 67.7 | 97.5 | | 90.0 |
| Bulacan | 196 | 3.6 | 73.6 | 84.9 | | 79.8 |
| Nueva Ecija | 168 | 5.3 | 70.9 | 87.6 | | 80.6 |
| Pampanga | 142 | 4.0 | 80.5 | 95.3 | | 90.1 |
| Tarlac | 96 | 2.2 | 89.3 | 98.5 | | 96.0 |
| Zambales | 28 | 7.7 | 66.5 | 91.8 | | 82.5 |

*High CV (>20.0)




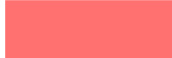


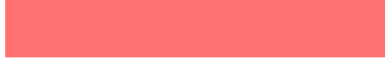



Percentage distribution of mothers who received their first postnatal check-up within 2 days: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence |
|---------------------|--------------------------|-----|----------------|----------------|--------------|
| Philippines | 7272 | 0.5 | 88.4 | 90.3 | 89.4 |
| Central Luzon | 517 | 1.3 | 90.7 | 95.4 | 93.4 |
| Aurora | Insufficient sample size | | | | |
| Bataan | 16 | - | - | - | 100.0 |
| Bulacan | 148 | 2.0 | 88.7 | 96.3 | 93.5 |
| Nueva Ecija | 121 | 3.7 | 81.1 | 94.6 | 89.7 |
| Pampanga | 121 | 1.9 | 90.0 | 97.8 | 95.3 |
| Tarlac | 82 | 3.8 | 81.8 | 98.3 | 94.2 |
| Zambales | 21 | 5.1 | 70.9 | 99.4 | 95.2 |



Percentage distribution of mothers who received their first postnatal check-up beyond 2 days: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|--------------------------|--------|----------------|----------------|---|-----|
| Philippines | 7272 | 9.0 | 1.9 | 2.7 |  | 2.2 |
| Central Luzon | 555 | 31.7* | 1.2 | 4.0 |  | 2.2 |
| Aurora | Insufficient sample size | | | | | |
| Bataan | 16 | - | - | - |  | 0.0 |
| Bulacan | 159 | 54.2* | 0.5 | 4.5 |  | 1.6 |
| Nueva Ecija | 135 | 53.0* | 1.3 | 10.2 |  | 3.7 |
| Pampanga | 127 | 100.4* | 0.1 | 4.9 |  | 0.7 |
| Tarlac | 87 | 76.6* | 0.8 | 14.9 |  | 3.6 |
| Zambales | 22 | 102.0* | 0.6 | 29.1 |  | 4.8 |

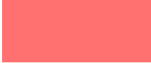





*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of **mothers who did not have postnatal check-up**: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|------|--------|--------------------------|----------------|--|-----|
| Philippines | 7272 | 5.4 | 7.5 | 9.3 |  | 8.3 |
| Central Luzon | 555 | 20.6* | 2.9 | 6.6 |  | 4.4 |
| Aurora | | | Insufficient sample size | | | |
| Bataan | 16 | - | - | - | | 0.0 |
| Bulacan | 159 | 31.9* | 2.6 | 9.1 |  | 4.9 |
| Nueva Ecija | 135 | 37.1* | 3.1 | 13.3 |  | 6.6 |
| Pampanga | 127 | 44.5* | 1.7 | 9.4 |  | 4.0 |
| Tarlac | 87 | 100.9* | 0.3 | 14.6 |  | 2.2 |
| Zambales | 22 | - | - | - | | 0.0 |

*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



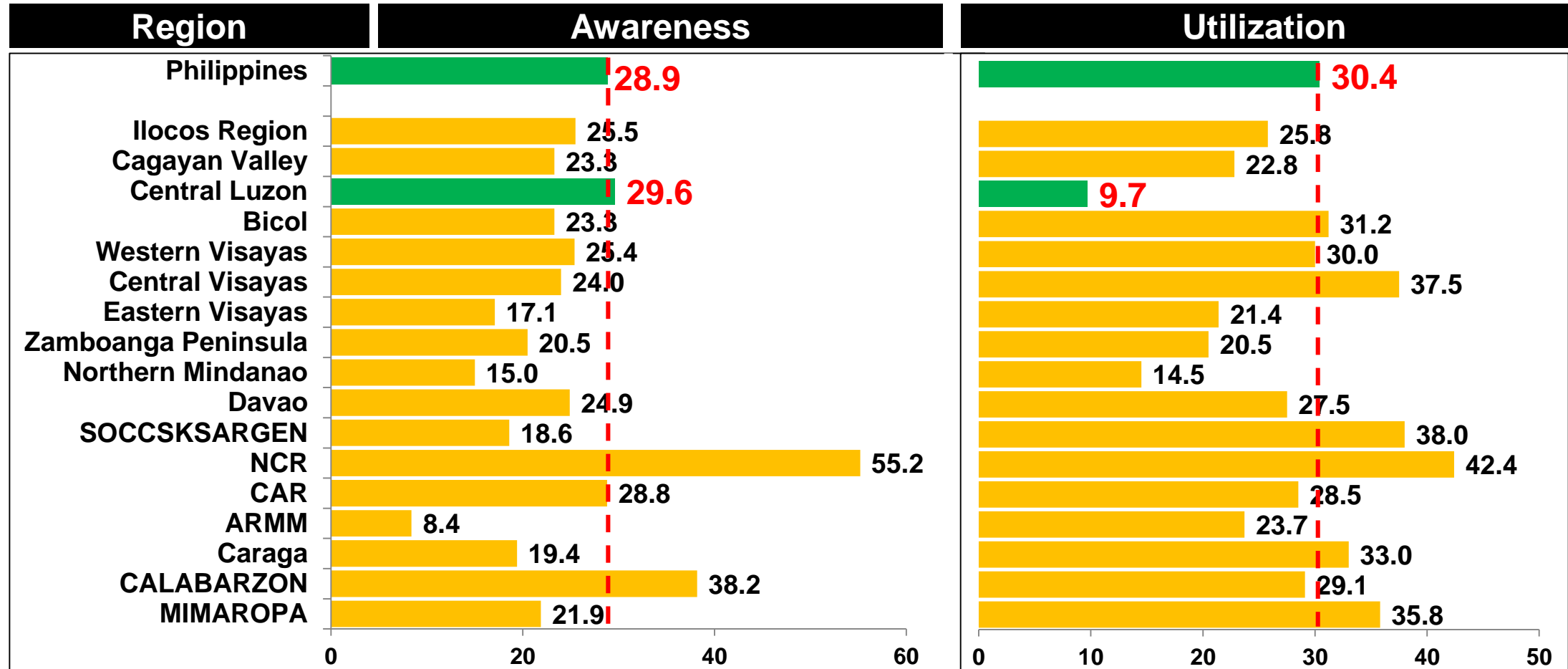
Awareness and Utilization of Lactation Stations



Department of Science and Technology
Food and Nutrition Research Institute



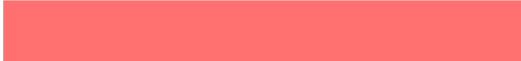







Awareness and utilization of lactation stations by mothers with children 0-36 months by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Awareness of lactation stations by mothers with children 0-36 months: Philippines & Central Luzon, 2015

| REGION/ PROVINCE | n | CV | LOWER LIMIT | UPPER LIMIT | % Prevalence | |
|---------------------|--------------------------|--------|----------------|----------------|---|------|
| Philippines | 7745 | 2.2 | 27.6 | 30.2 |  | 28.9 |
| Central Luzon | 615 | 8.2 | 25.1 | 34.5 |  | 29.6 |
| Aurora | Insufficient sample size | | | | | |
| Bataan | 18 | 107.3* | 0.6 | 32.7 |  | 5.0 |
| Bulacan | 181 | 13.0 | 26.7 | 44.4 |  | 35.0 |
| Nueva Ecija | 161 | 14.2 | 20.1 | 35.0 |  | 26.9 |
| Pampanga | 139 | 14.6 | 23.6 | 41.8 |  | 32.0 |
| Tarlac | 84 | 34.5* | 12.1 | 45.6 |  | 25.3 |
| Zambales | 23 | 42.5* | 10.5 | 53.4 |  | 26.8 |

*High CV (>20.0)



Department of Science and Technology
Food and Nutrition Research Institute



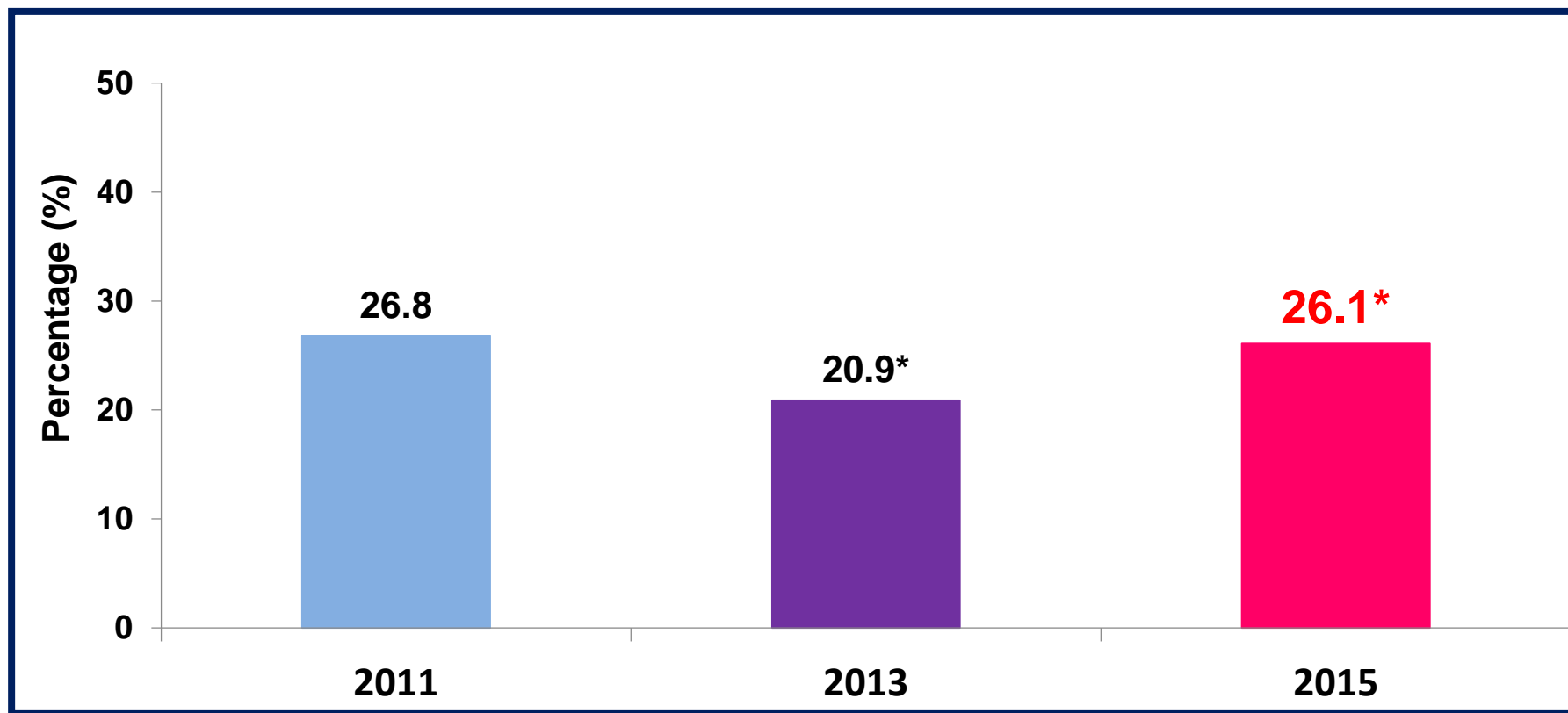
Prelacteal Feeding



Department of Science and Technology
Food and Nutrition Research Institute



Trends of prelacteal feeding among children 0-23 months: Philippines, 2011-2015



*significant (p-value<0.05)

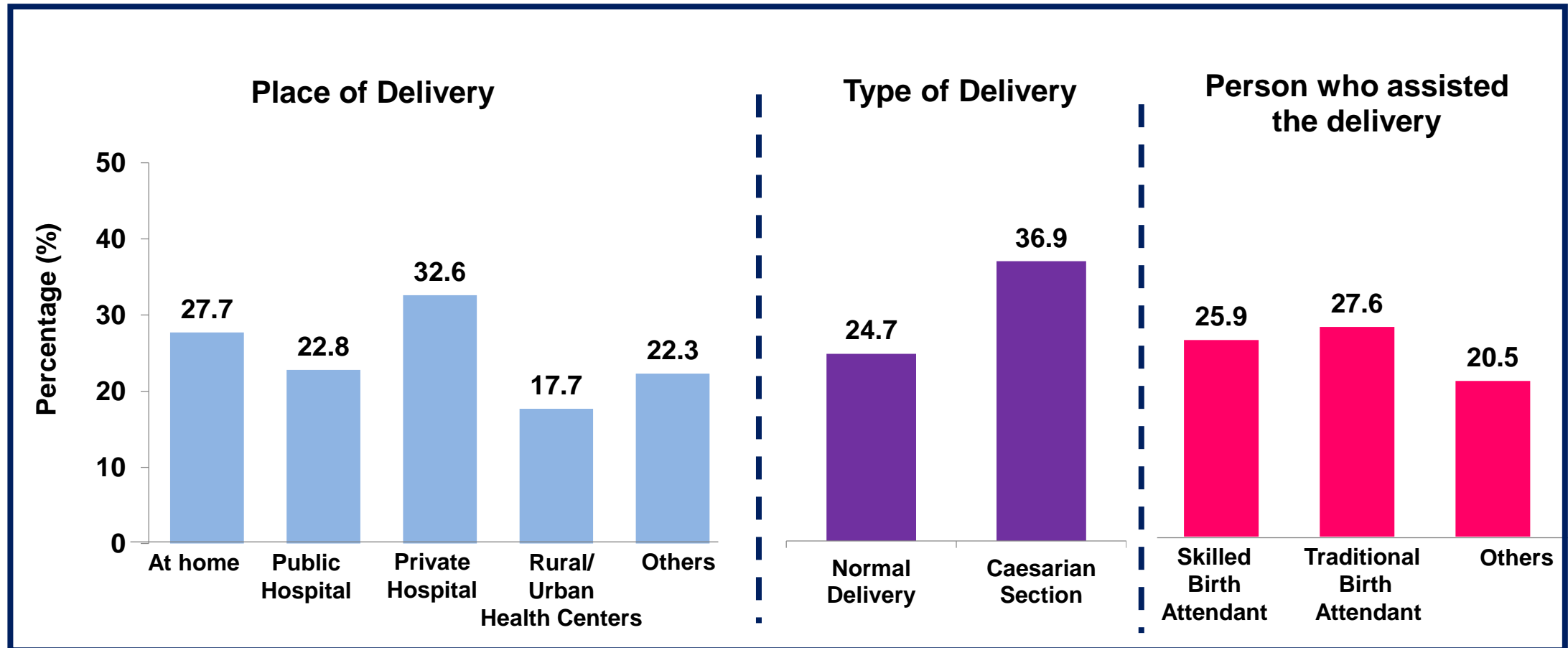


Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of children 0-23 months who were given prelacteals by mother's delivery characteristics: Philippines, 2015

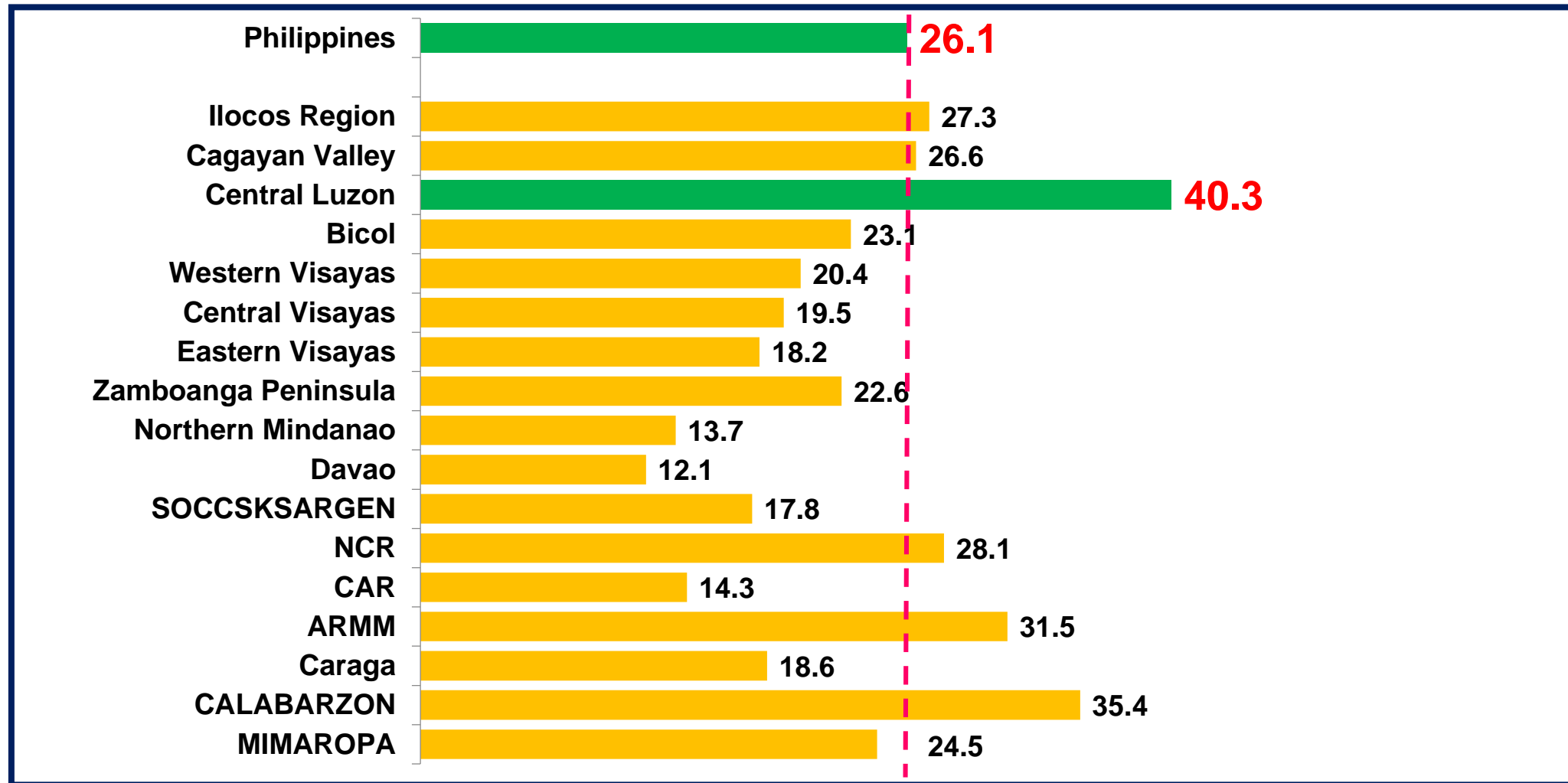
Philippines: 26.1



Department of Science and Technology
Food and Nutrition Research Institute



Percentage distribution of children 0-23 months who were given prelacteals by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



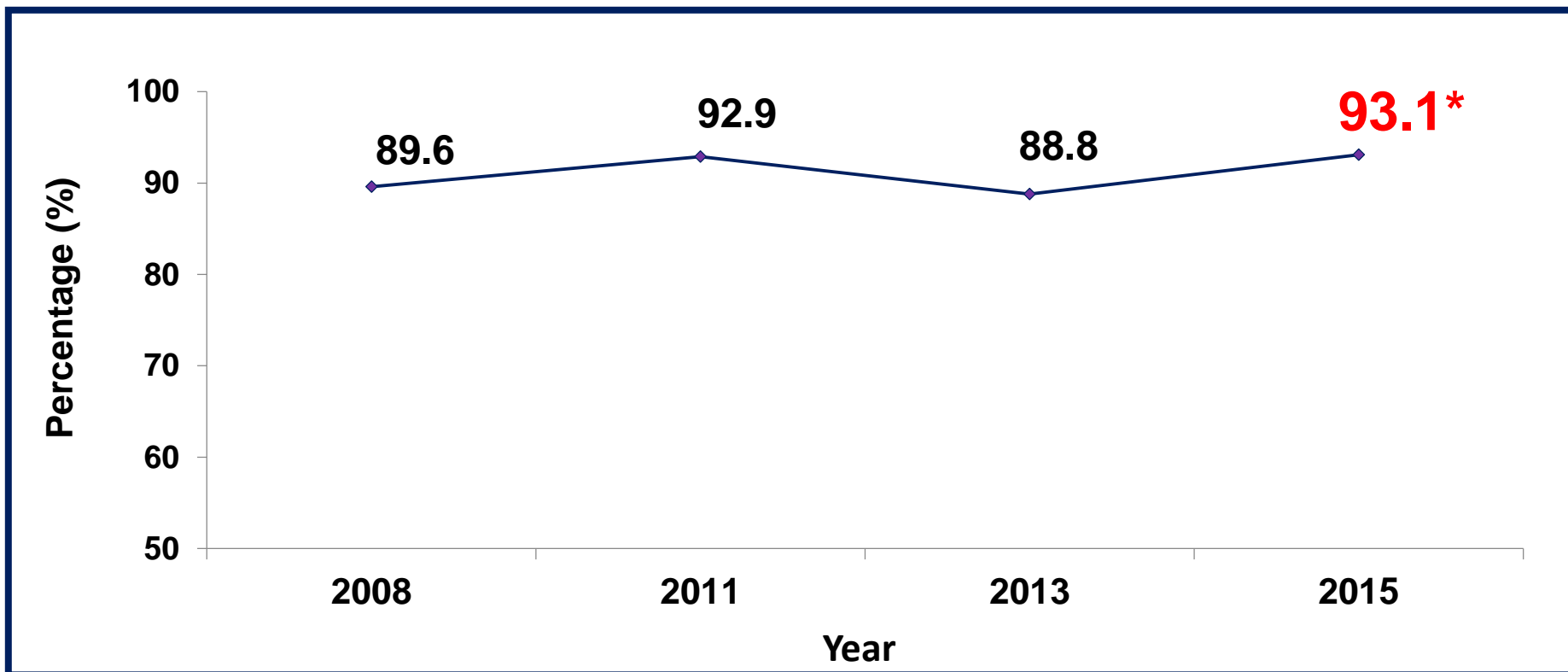
Everbreastfeeding



Department of Science and Technology
Food and Nutrition Research Institute



Trends of everbreastfeeding rate among children 0-23 months: Philippines, 2003-2015



* For comparison purposes, 2003 and 2008 feeding practice is based on the usual feeding at the time of the survey

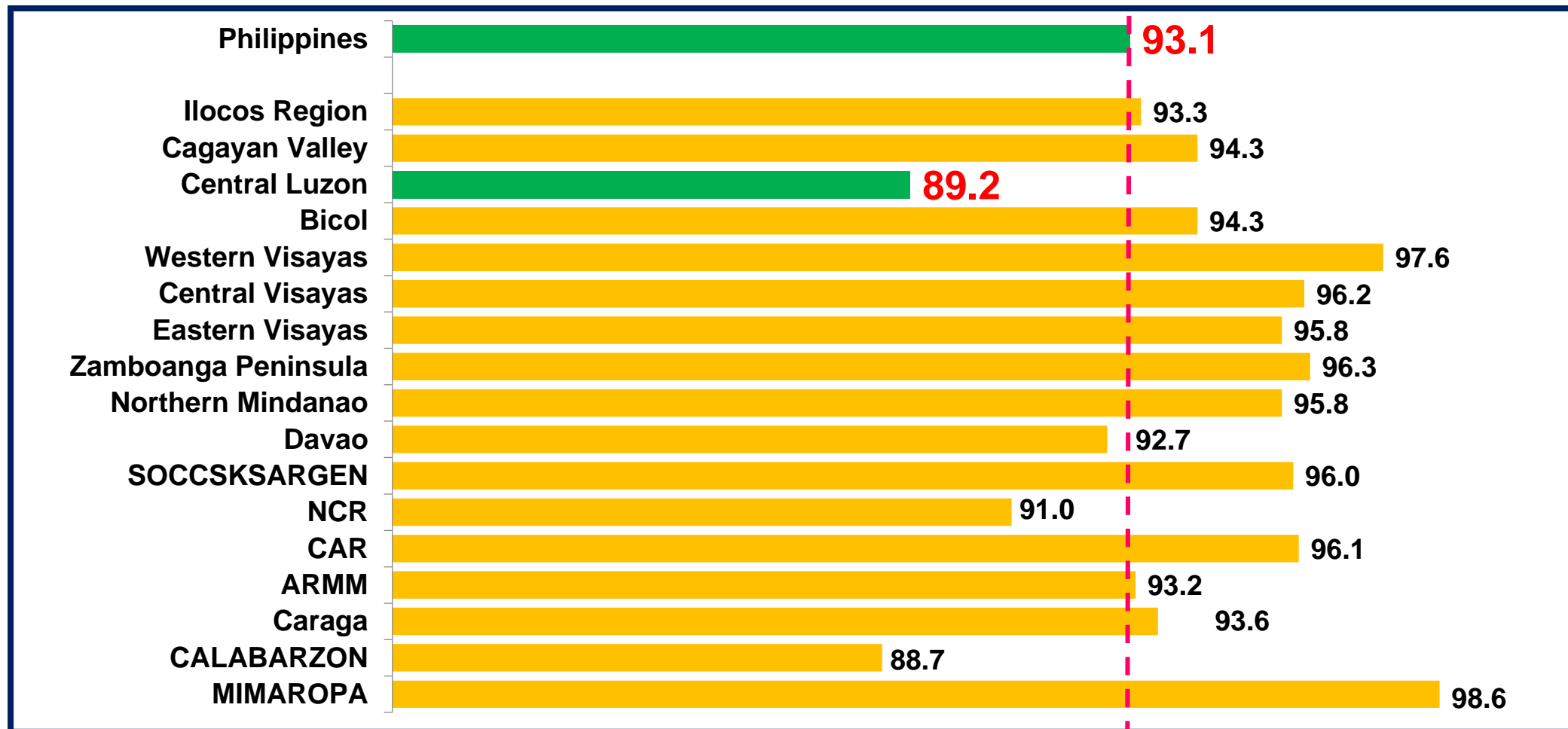
*significant (p-value<0.05)



Department of Science and Technology
Food and Nutrition Research Institute



Percentage of ever breastfed children 0-23 months by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute





Government Program Participation Region III (Central Luzon)

2015 Updating of the Nutritional Status of Filipino Children and Other Population Groups



Department of Science and Technology
Food and Nutrition Research Institute



Government Programs

HOUSEHOLD

Pantawid Pamilyang Pilipino Program (4Ps)



INDIVIDUAL

0 to 71 months

- Newborn Screening
- Expanded Program on Immunization
- Micronutrient Powder
- Deworming
- Vitamin A Supplementation
- Incidence of Diarrhea

6 to 12 years old

- Deworming



Department of Science and Technology
Food and Nutrition Research Institute



Newborn Screening



Department of Science and Technology
Food and Nutrition Research Institute



Newborn Screening

- It is a procedure intended for early identification of infants who are affected by certain genetic, metabolic, or infectious conditions that may lead to mental retardation or morbidity if left untreated.



Department of Science and Technology
Food and Nutrition Research Institute

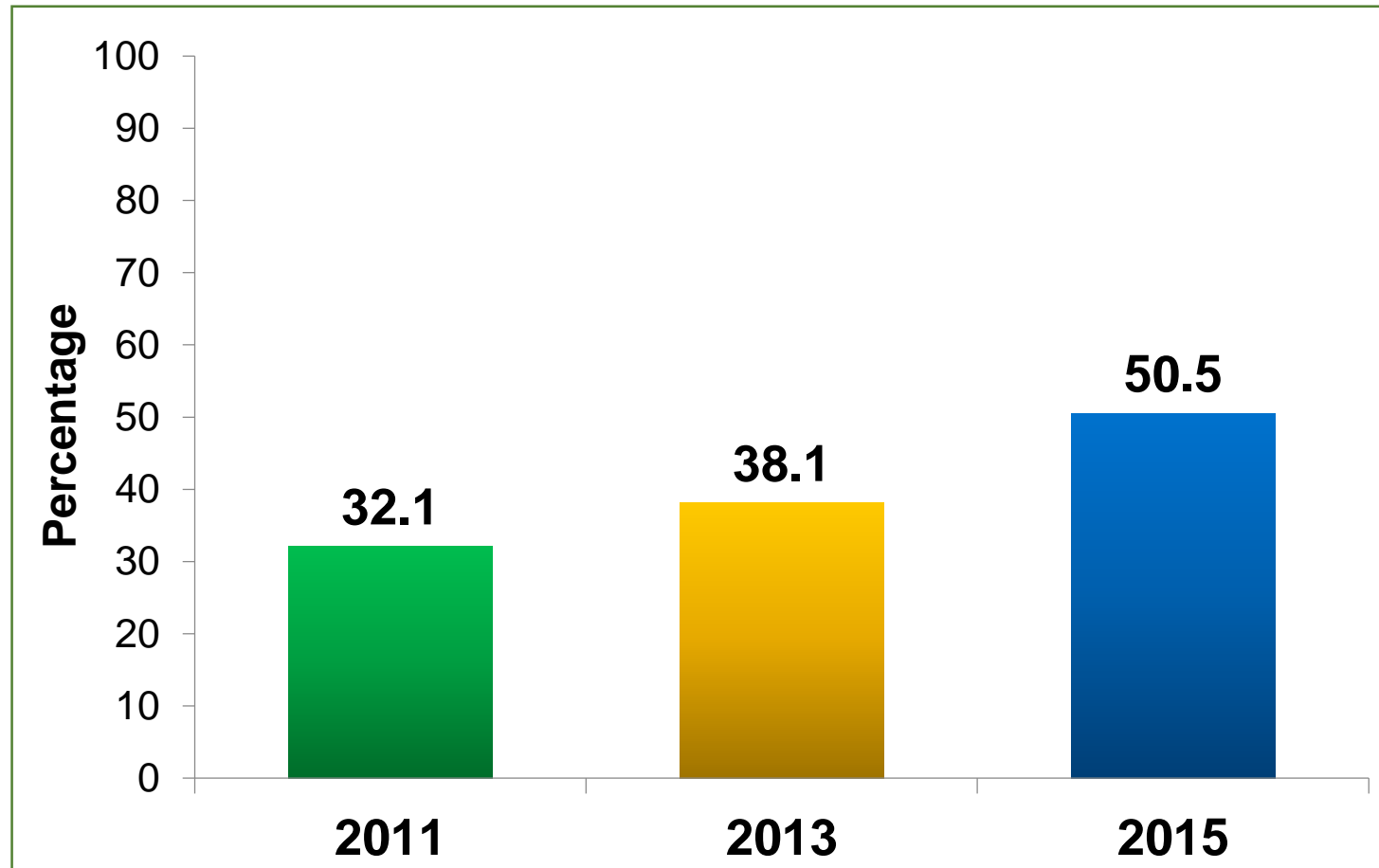


Newborn Screening

- Newborn screening program in the Philippines includes screening of six disorders:
 - ✓ Congenital Hypothyroidism
 - ✓ Congenital Adrenal Hyperplasia
 - ✓ Phenylketonuria
 - ✓ Glucose-6-phosphate Dehydrogenase (G6PD)
 - ✓ Galactosemia
 - ✓ Maple Syrup Urine Disease



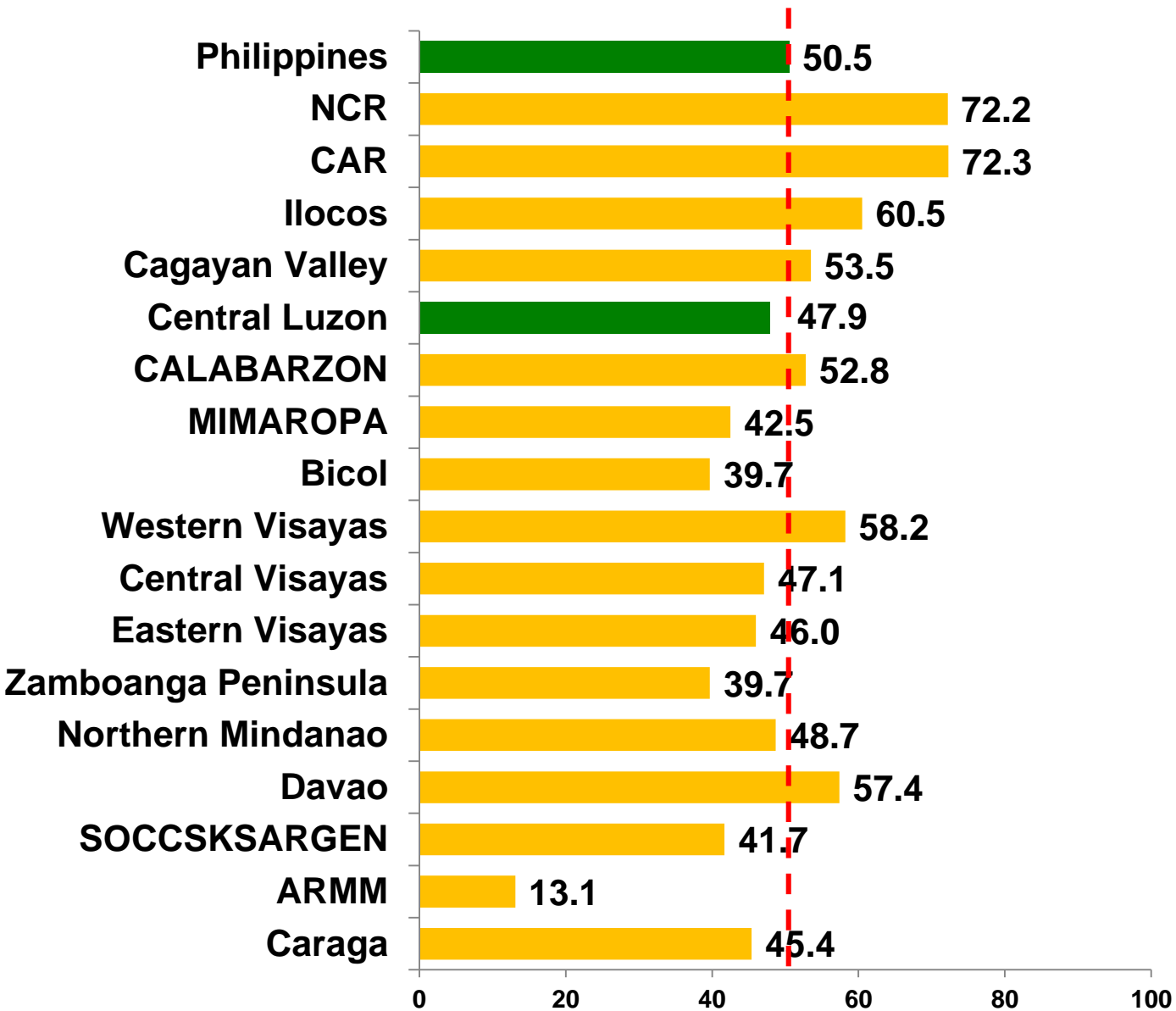
Percent of children, 0-71 months old, who underwent **Newborn Screening**: Philippines, 2011-2015



Department of Science and Technology
Food and Nutrition Research Institute



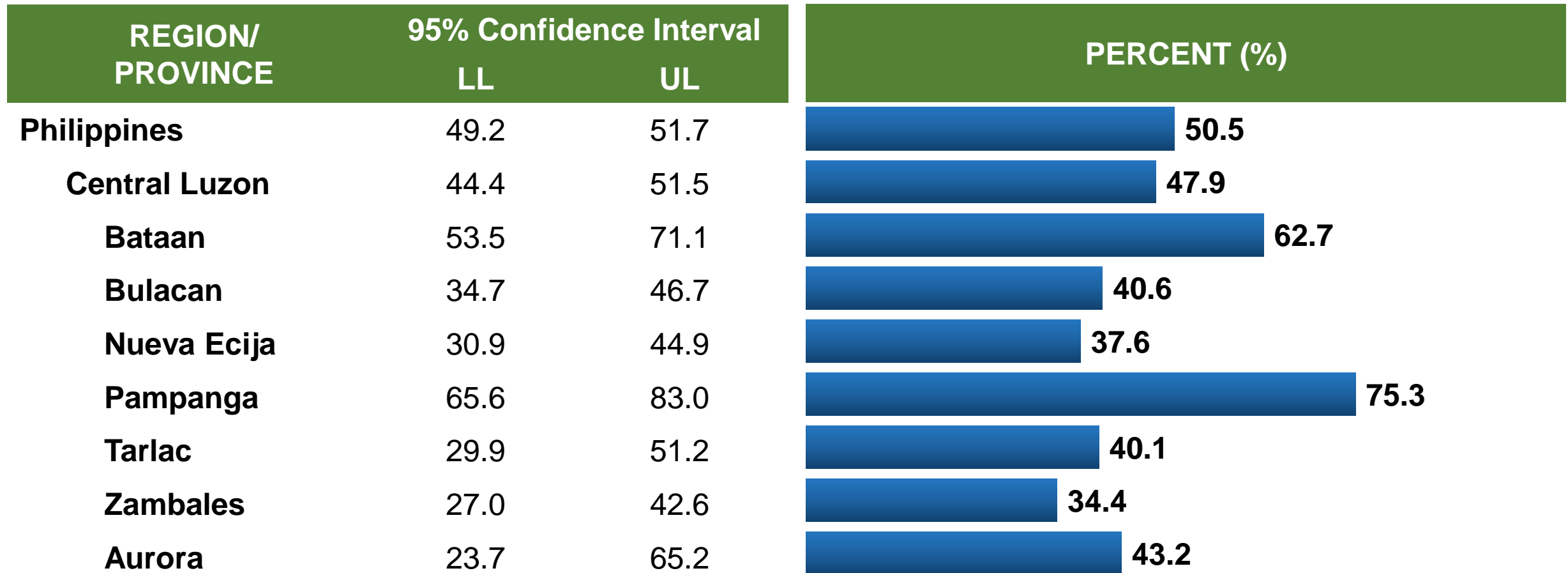
Percent of children, 0-71 months old, who underwent Newborn Screening by region: Philippines, 2015



| LL | UL |
|------|------|
| 49.2 | 51.7 |
| 69.1 | 75.2 |
| 67.8 | 76.3 |
| 55.5 | 65.4 |
| 49.0 | 57.9 |
| 44.4 | 51.5 |
| 49.0 | 56.6 |
| 37.1 | 48.0 |
| 35.9 | 43.6 |
| 53.4 | 62.9 |
| 42.9 | 51.4 |
| 41.7 | 50.4 |
| 34.7 | 45.0 |
| 42.2 | 55.2 |
| 53.2 | 61.6 |
| 36.4 | 47.2 |
| 10.3 | 16.5 |
| 39.2 | 51.7 |



Percent of children, 0-71 months old, who underwent **Newborn Screening** in **Central Luzon**: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Expanded Program on Immunization



Department of Science and Technology
Food and Nutrition Research Institute



Expanded Program on Immunization (EPI)

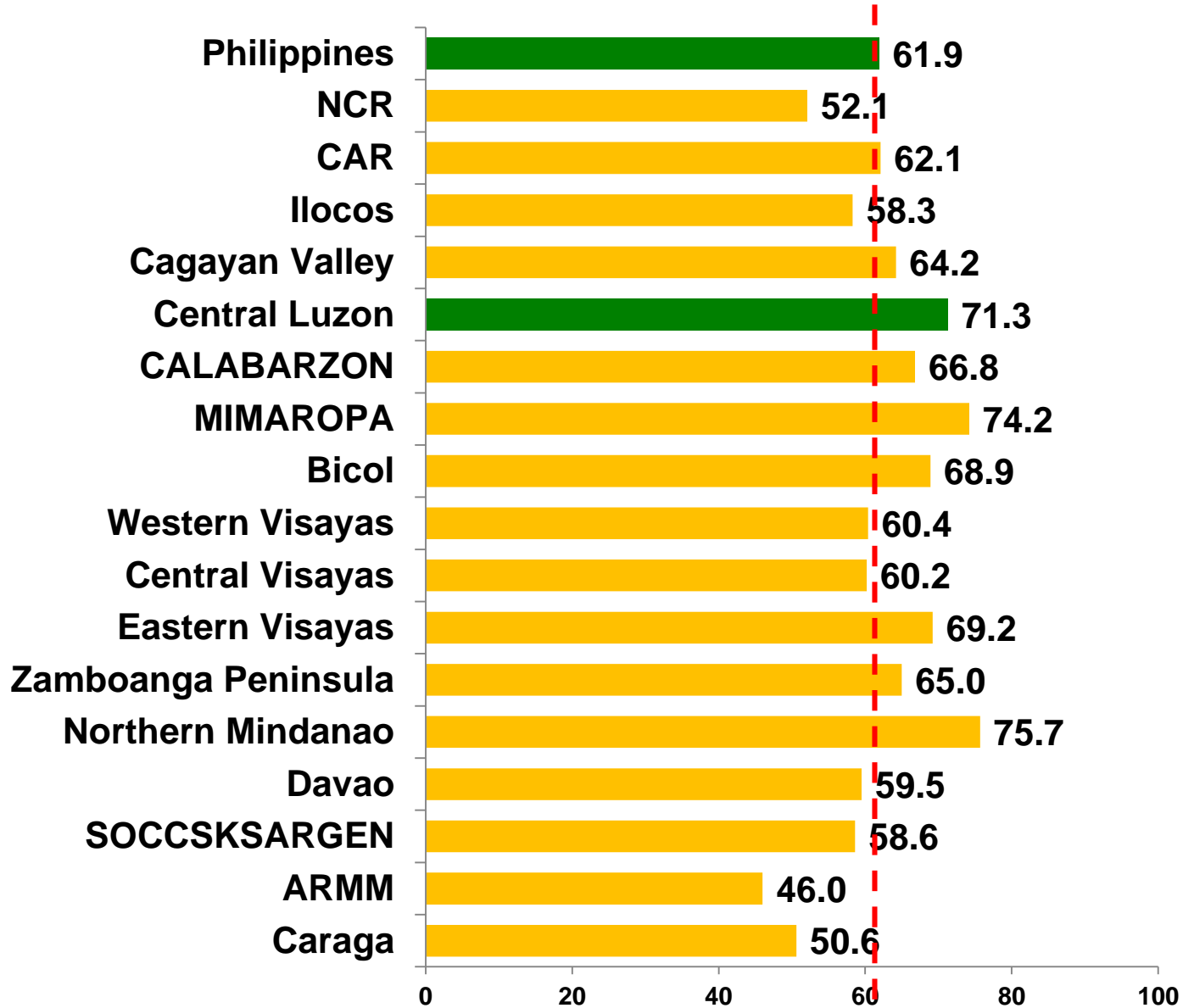
- One of the programs of the Department of Health (DOH) established in 1976 to ensure that infants/children and mothers have access to routinely recommended infant/childhood vaccines.
- A child is considered fully immunized (**FULLY IMMUNIZED CHILD**) if he/she had BCG, measles, and three doses each of DPT, OPV and Hepa-B vaccines before the first birthday.



Department of Science and Technology
Food and Nutrition Research Institute



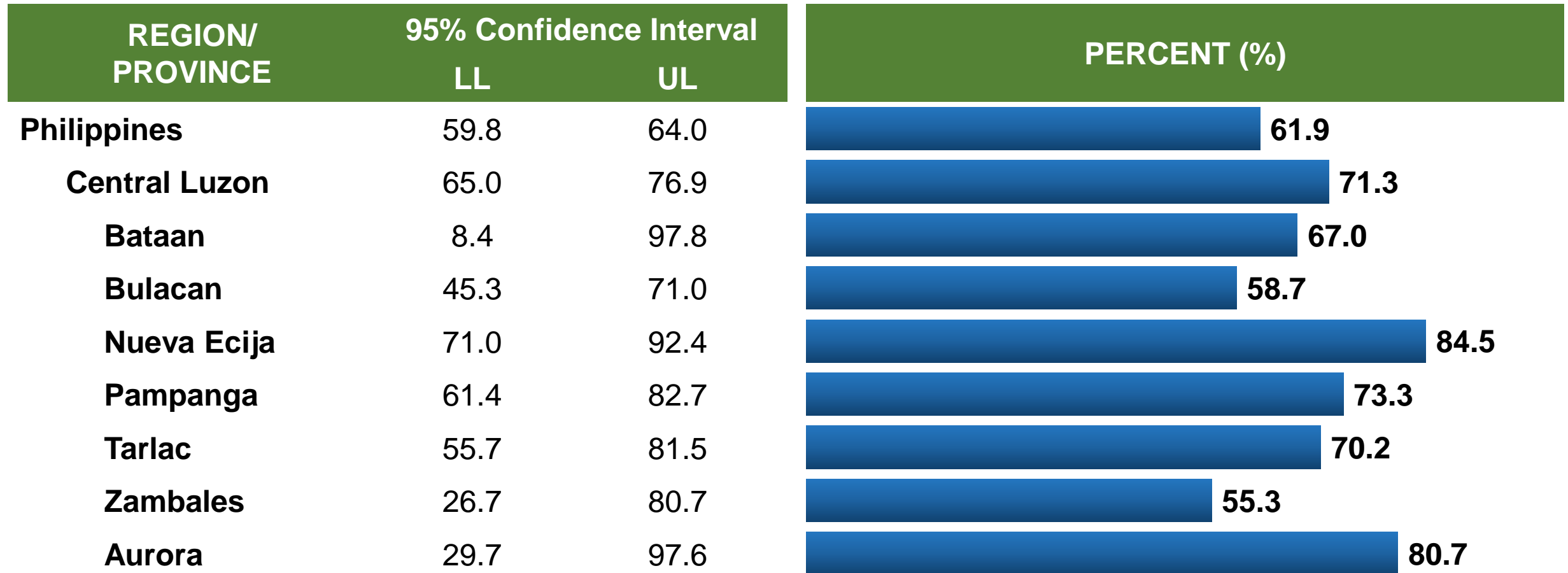
Percent of fully immunized children, 12-23 months old, by region: Philippines, 2015



| LL | UL |
|------|------|
| 59.8 | 64.0 |
| 45.9 | 58.3 |
| 50.4 | 72.6 |
| 48.5 | 67.5 |
| 55.1 | 72.3 |
| 65.0 | 76.9 |
| 60.2 | 72.8 |
| 62.7 | 83.1 |
| 60.7 | 76.1 |
| 53.1 | 67.3 |
| 51.7 | 68.1 |
| 60.3 | 76.8 |
| 55.2 | 73.7 |
| 66.8 | 82.9 |
| 51.2 | 67.2 |
| 50.4 | 66.3 |
| 35.8 | 56.5 |
| 42.4 | 58.9 |



Percent of **fully immunized children**, 12-23 months old, in **Central Luzon**: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute





© Matt Dayka/Vitamin Angels IN12



Vitamin A Supplementation



Department of Science and Technology
Food and Nutrition Research Institute



Vitamin A Supplementation

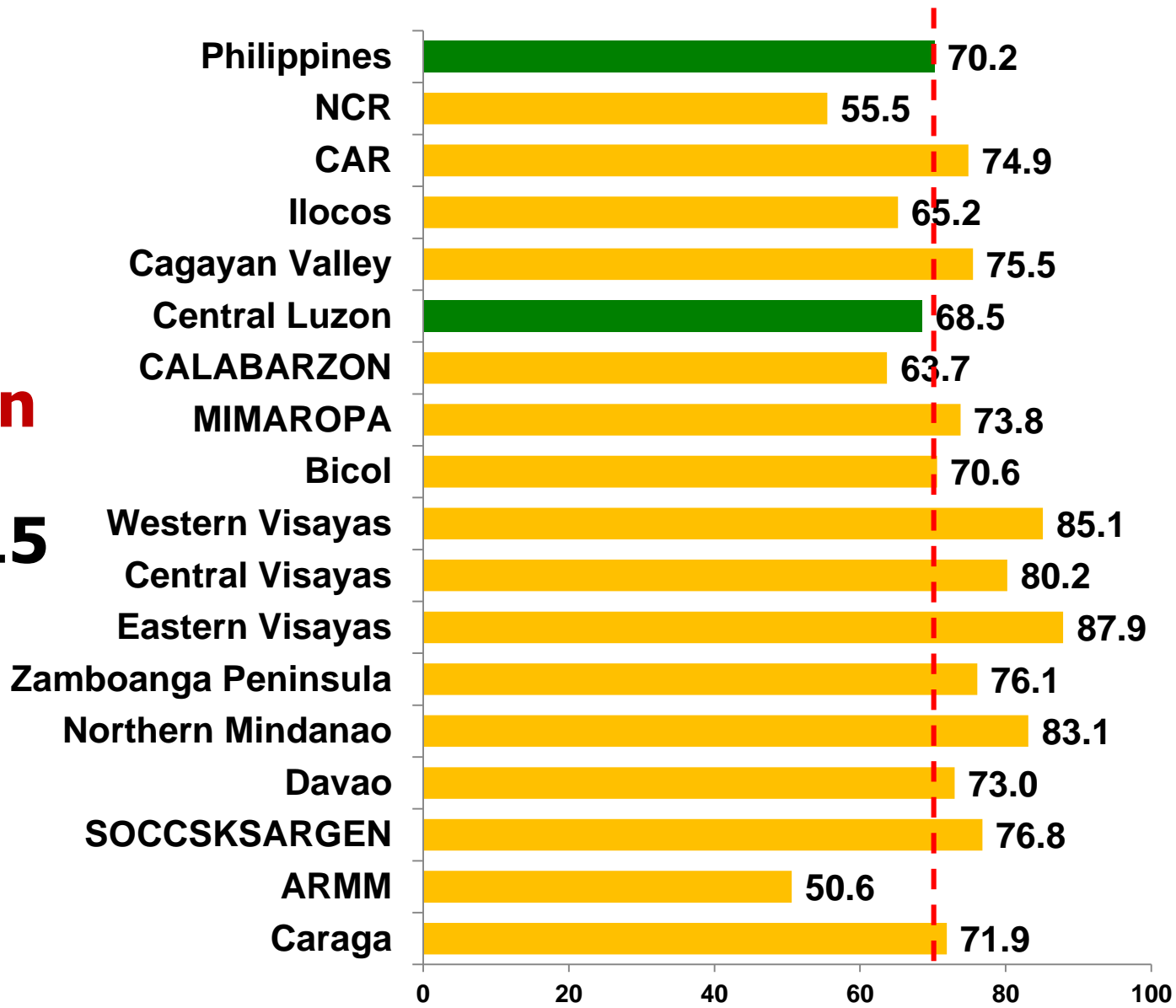
- One of the programs under Garantisadong Pambata (GP) Campaign which aims to promote equity of health coverage in support of the Universal Health Care (UHC) for all Filipinos and to contribute to the achievement of the Millenium Development Goals (MDGs), particularly in reducing child morbidity and mortality.



Department of Science and Technology
Food and Nutrition Research Institute



Percent of children 12-59 months who participated in Vitamin A supplementation by region: Philippines, 2015



| LL | UL |
|------|------|
| 68.7 | 71.6 |
| 50.2 | 60.8 |
| 69.8 | 79.3 |
| 59.6 | 70.4 |
| 69.9 | 80.4 |
| 64.1 | 72.5 |
| 59.1 | 68.1 |
| 68.8 | 78.2 |
| 67.0 | 74.0 |
| 81.9 | 87.8 |
| 74.2 | 85.0 |
| 84.5 | 90.7 |
| 68.6 | 82.3 |
| 77.4 | 87.6 |
| 66.5 | 78.7 |
| 71.9 | 81.2 |
| 40.7 | 60.5 |
| 65.7 | 77.4 |



Percent of children, 12-59 months who participated in Vitamin A Supplementation in Central Luzon: Philippines, 2015

| REGION/ PROVINCE | 95% Confidence Interval | | PERCENT (%) |
|---------------------|-------------------------|------|-------------|
| | LL | UL | |
| Philippines | 68.7 | 71.6 | 70.2 |
| Central Luzon | 64.1 | 72.5 | 68.5 |
| Bataan | 55.8 | 80.5 | 69.5 |
| Bulacan | 48.3 | 59.7 | 54.0 |
| Nueva Ecija | 62.4 | 82.1 | 73.4 |
| Pampanga | 60.3 | 86.6 | 75.8 |
| Tarlac | 54.9 | 77.4 | 67.1 |
| Zambales | 67.1 | 90.2 | 81.3 |
| Aurora | - | - | 100.0 |



Department of Science and Technology
Food and Nutrition Research Institute





Micronutrient Supplementation



Department of Science and Technology
Food and Nutrition Research Institute



Micronutrient Supplementation

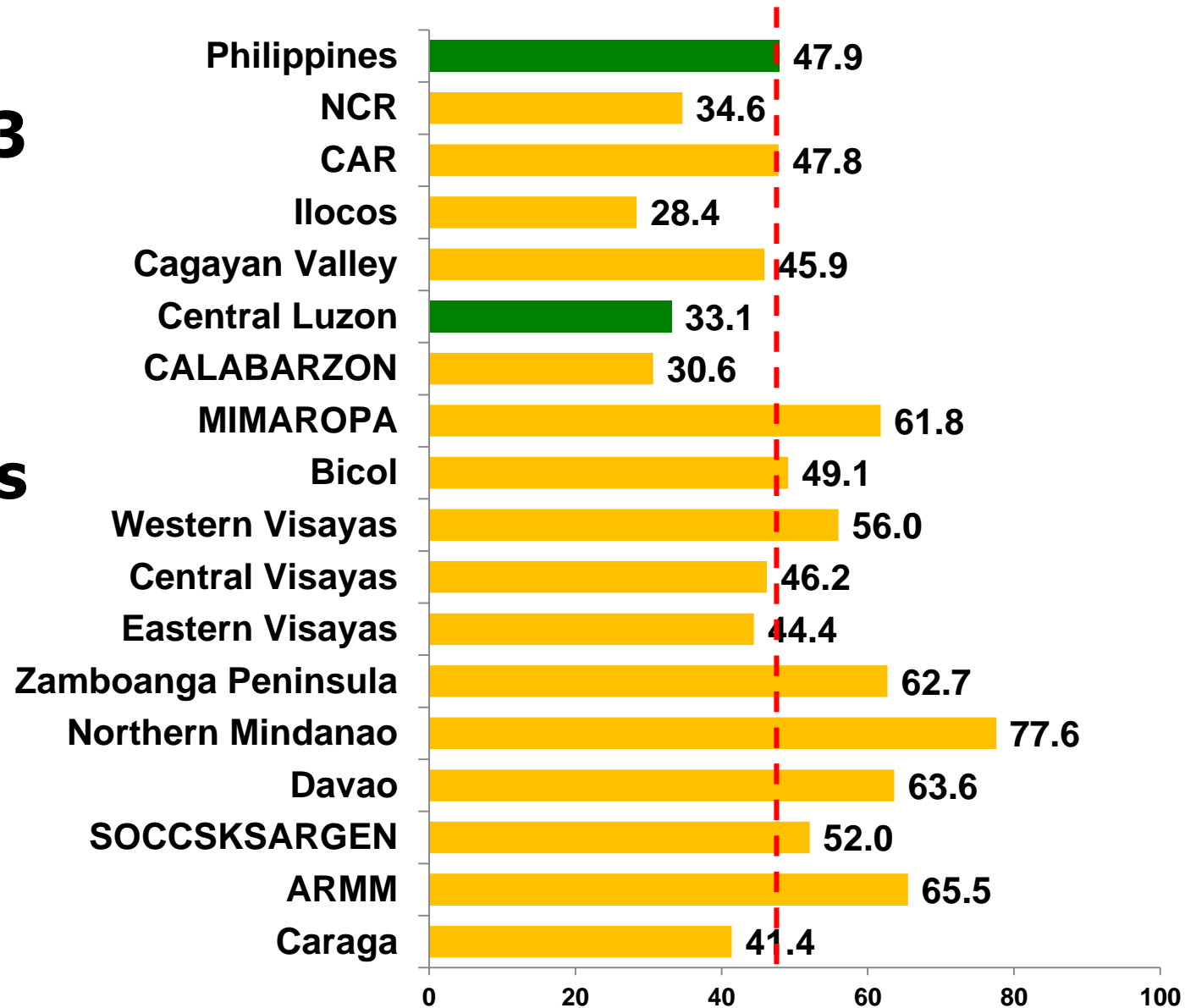
- Micronutrient Powder (MNP) is a premix of vitamins and minerals in powder form which may be sprinkled once daily into any semi-liquid foods without changing the color, taste or texture of the food.



Department of Science and Technology
Food and Nutrition Research Institute



Proportion of children 6 to 23 months who tried Micronutrient Powder (MNP) among mothers who are aware by region: Philippines, 2015



| LL | UL |
|------|------|
| 42.7 | 53.2 |
| 20.5 | 52.2 |
| 33.4 | 62.6 |
| 8.7 | 62.3 |
| 28.5 | 64.2 |
| 24.6 | 42.9 |
| 22.2 | 40.7 |
| 46.7 | 74.8 |
| 33.1 | 65.2 |
| 42.4 | 68.8 |
| 20.2 | 74.4 |
| 21.5 | 69.9 |
| 46.2 | 76.7 |
| 59.6 | 89.0 |
| 48.3 | 76.6 |
| 26.8 | 76.3 |
| 34.2 | 87.4 |
| 34.1 | 49.0 |



Department of Science and Technology
Food and Nutrition Research Institute



Deworming



Department of Science and Technology
Food and Nutrition Research Institute



Management
System
ISO 9001:2015
www.tuv.com
ID 9105083248



Deworming

- **Mass Deworming** – giving of antihelminthic or deworming drugs to an entire group of people without prior diagnosis of current infection to get rid of intestinal parasites which include hookworm, ascaris, and trichuris.
- For **preschoolers**(1-4 years old), deworming is done during the nationwide *Garantisadong Pambata* (GP) campaign in April and October. For the **school children** (5-12 years old), deworming is scheduled every January and July



Deworming

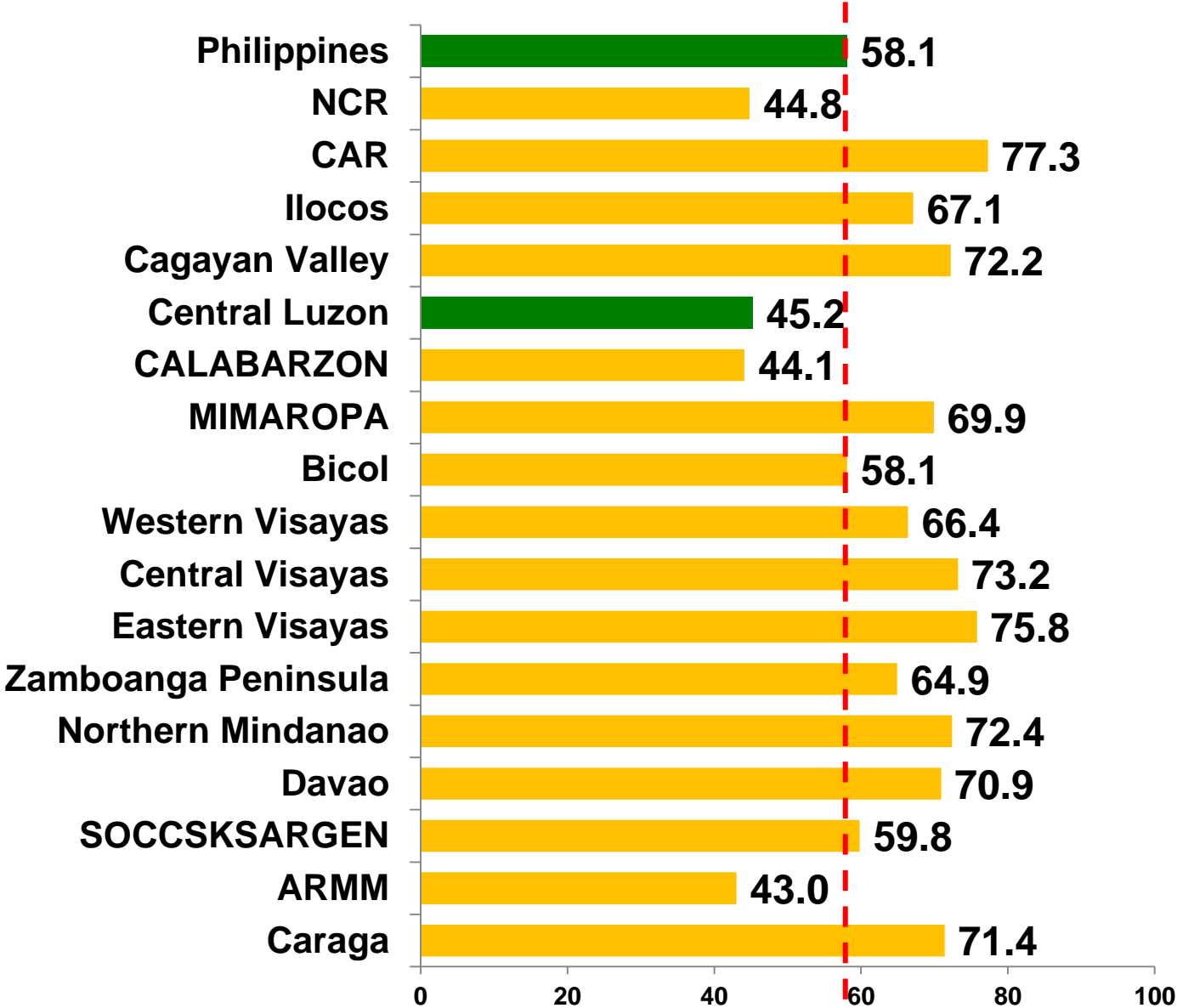
(12 to 71 months old)



Department of Science and Technology
Food and Nutrition Research Institute



Percent participation of children 12-71 months old in deworming program by region: Philippines, 2015



| LL | UL |
|------|------|
| 56.9 | 59.3 |
| 41.2 | 48.5 |
| 73.1 | 81.1 |
| 61.7 | 72.1 |
| 68.9 | 75.2 |
| 42.2 | 48.2 |
| 40.1 | 48.3 |
| 64.5 | 74.8 |
| 54.0 | 62.1 |
| 62.9 | 69.8 |
| 67.9 | 78.0 |
| 71.7 | 79.5 |
| 59.9 | 69.6 |
| 68.2 | 76.3 |
| 66.7 | 74.8 |
| 55.1 | 64.3 |
| 34.7 | 51.7 |
| 67.2 | 75.2 |

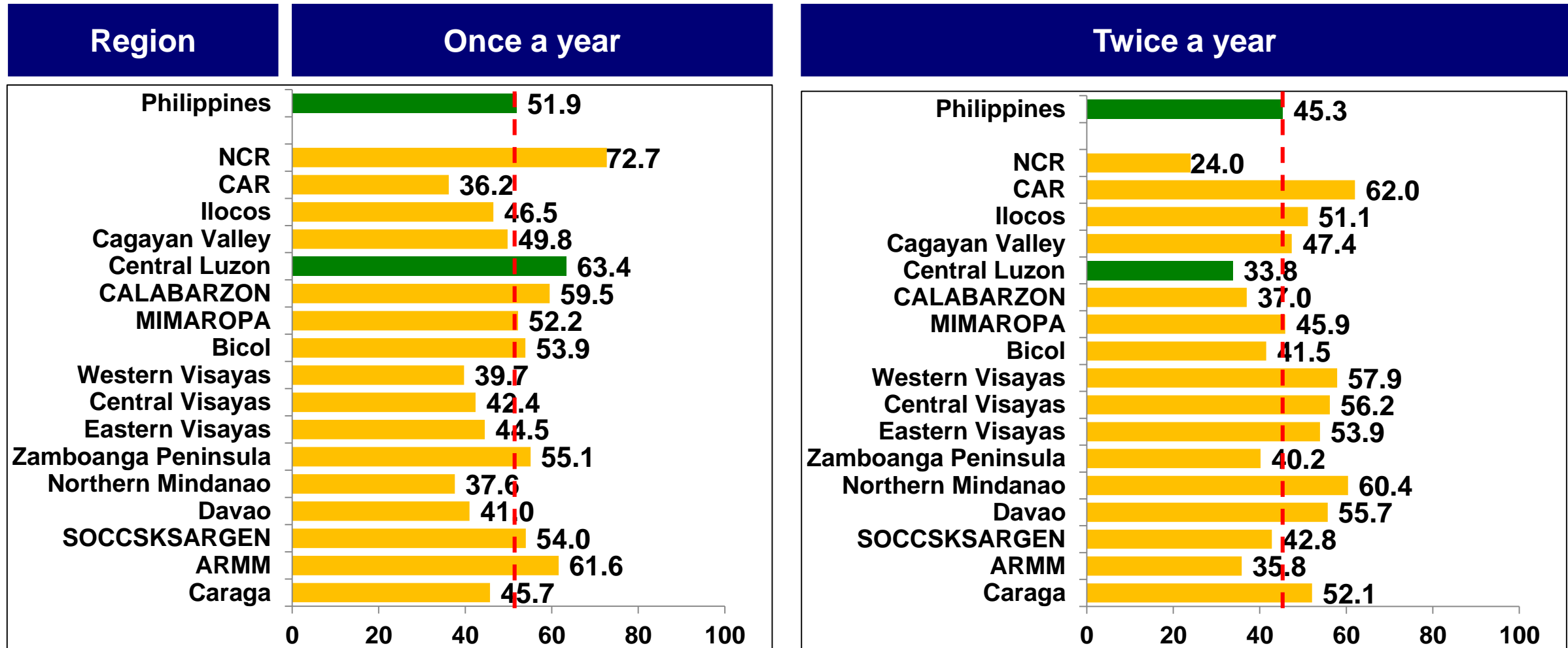


Percent participation of children 12-71 months old in deworming program in Central Luzon: Philippines, 2015

| REGION/ PROVINCE | 95% Confidence Interval | | PERCENT (%) |
|---------------------|-------------------------|------|-------------|
| | LL | UL | |
| Philippines | 56.9 | 59.3 | 58.1 |
| Central Luzon | 42.2 | 48.2 | 45.2 |
| Bataan | 35.4 | 77.3 | 57.8 |
| Bulacan | 27.9 | 39.1 | 33.3 |
| Nueva Ecija | 39.0 | 51.5 | 45.2 |
| Pampanga | 44.8 | 55.7 | 50.3 |
| Tarlac | 37.8 | 55.3 | 46.5 |
| Zambales | 51.9 | 80.1 | 67.6 |
| Aurora | 43.9 | 90.4 | 73.1 |



Frequency of participation of children 12-71 months old in deworming by region: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Deworming

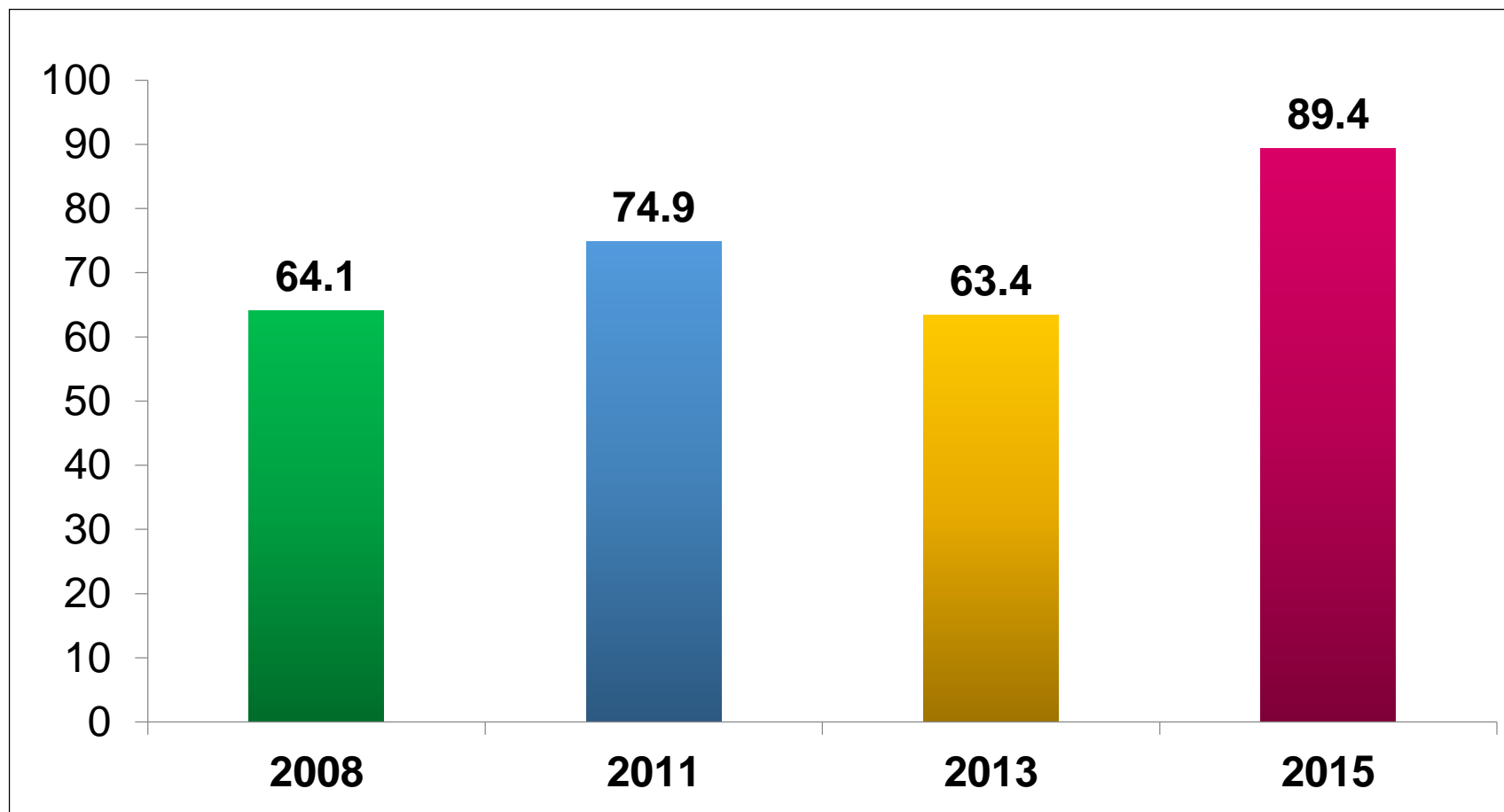
(6 to 12 years old)



Department of Science and Technology
Food and Nutrition Research Institute



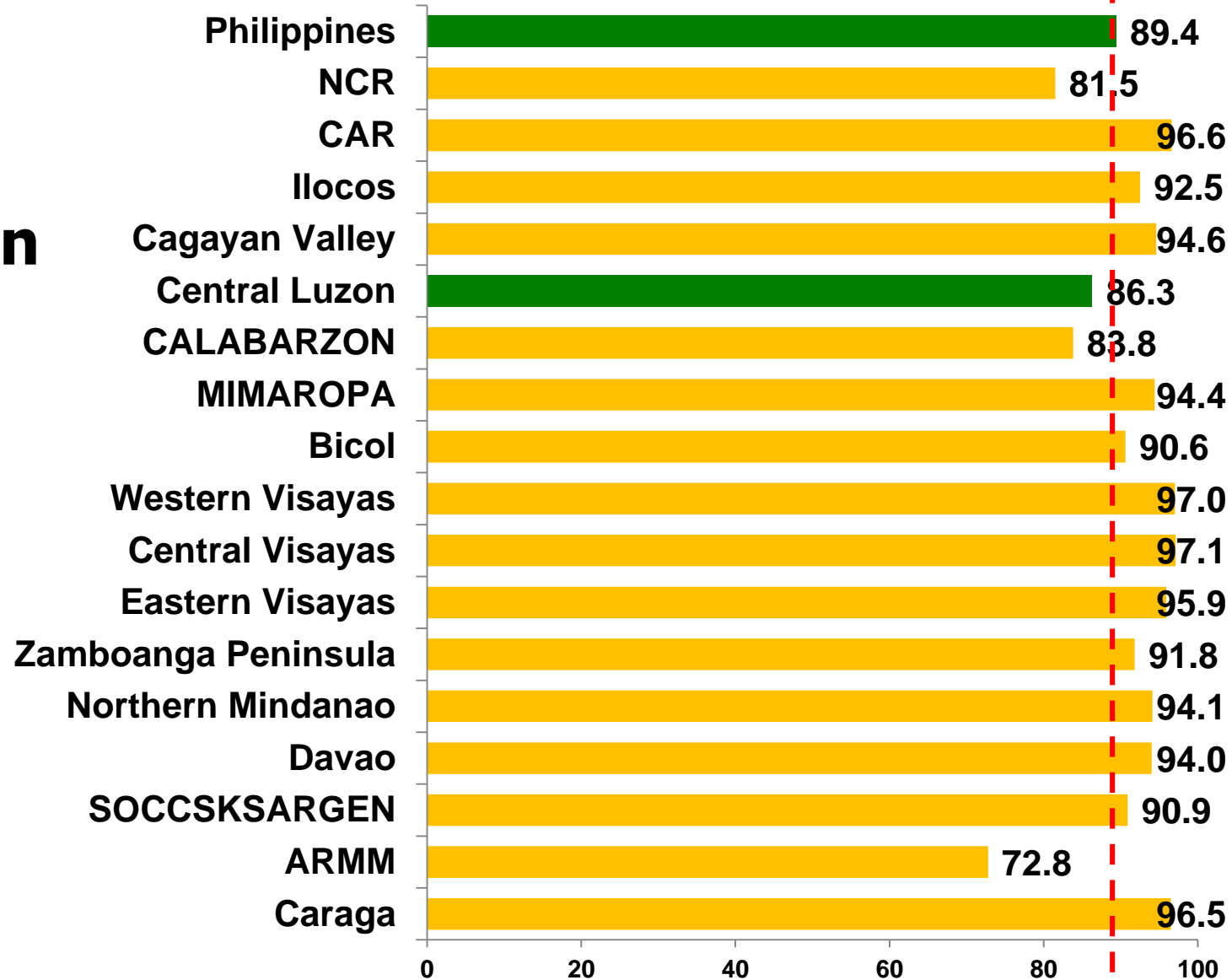
Proportion of children 6-12 years old participating in **deworming program**: Philippines, 2008 to 2015



Department of Science and Technology
Food and Nutrition Research Institute



Proportion of children 6-12 years old participating in deworming program by region: Philippines, 2015



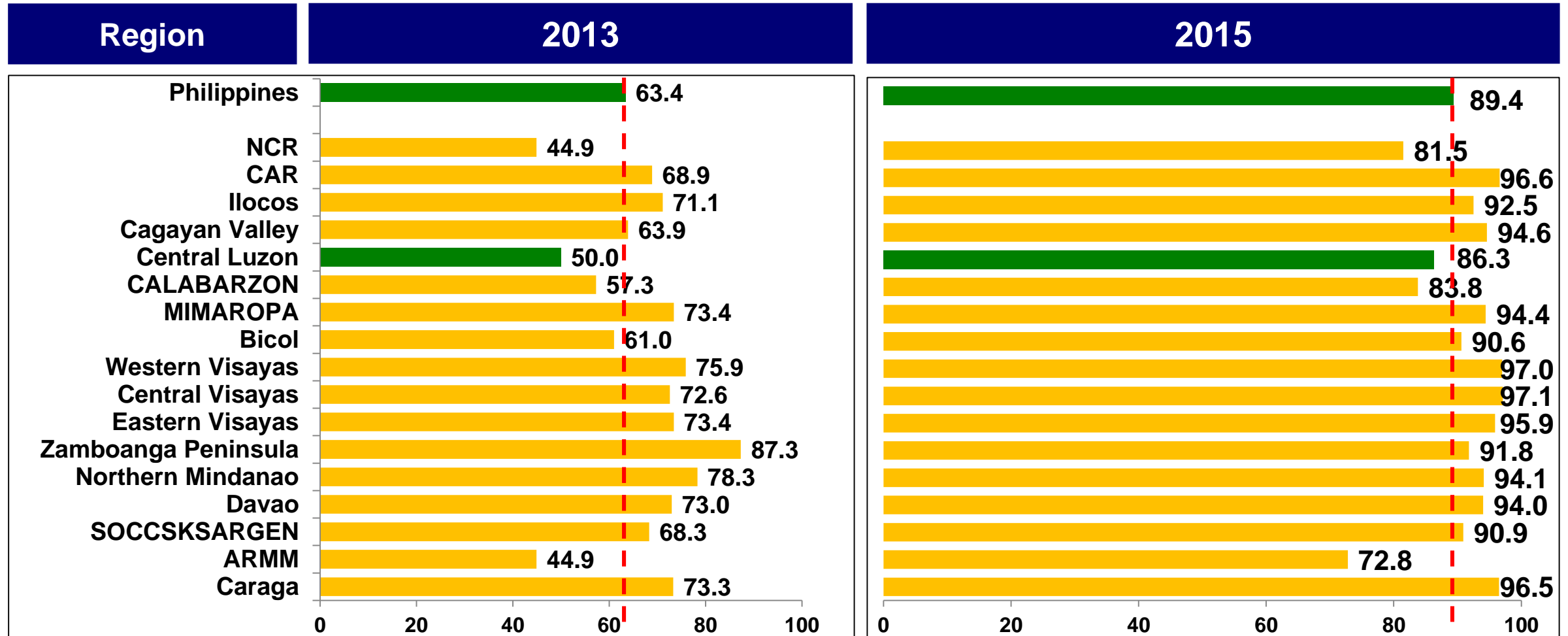
| LL | UL |
|------|------|
| 88.8 | 90.0 |
| 79.0 | 83.7 |
| 94.1 | 98.1 |
| 90.4 | 94.2 |
| 92.6 | 96.1 |
| 83.8 | 88.4 |
| 81.6 | 85.8 |
| 92.2 | 96.0 |
| 88.9 | 92.0 |
| 95.9 | 97.8 |
| 95.9 | 97.9 |
| 94.0 | 97.2 |
| 88.5 | 94.3 |
| 91.8 | 95.8 |
| 92.1 | 95.5 |
| 88.5 | 92.9 |
| 66.3 | 78.4 |
| 94.9 | 97.6 |



Department of Science and Technology
Food and Nutrition Research Institute



Proportion of children 6-12 years old participating in deworming program by region: Philippines, 2013 & 2015



Department of Science and Technology
Food and Nutrition Research Institute

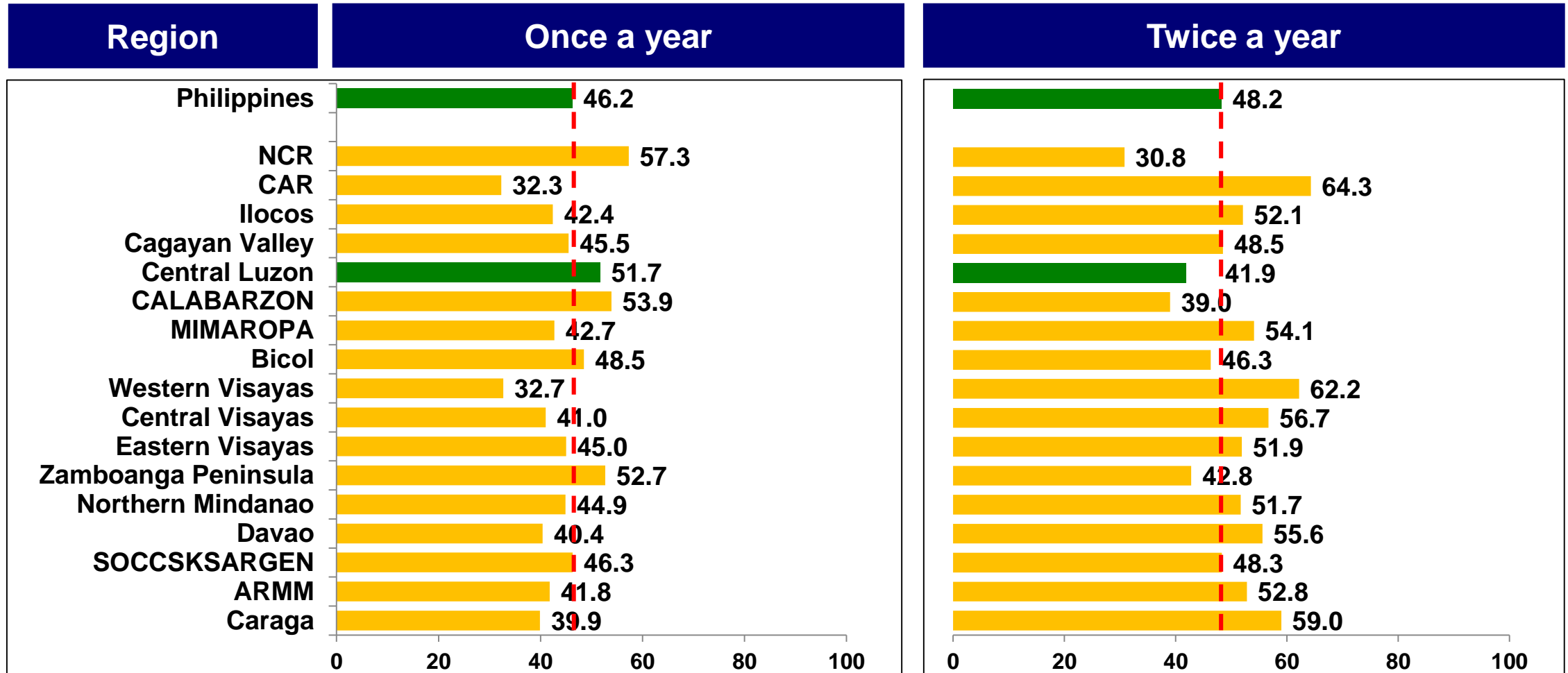


Proportion of children, 6-12 years old participating in **deworming program** in **Central Luzon**: Philippines, 2015

| REGION/ PROVINCE | 95% Confidence Interval | | PERCENT (%) |
|---------------------|-------------------------|------|-------------|
| | LL | UL | |
| Philippines | 88.8 | 90.0 | 89.4 |
| Central Luzon | 83.8 | 88.4 | 86.3 |
| Bataan | 78.6 | 98.6 | 94.1 |
| Bulacan | 71.0 | 83.0 | 77.5 |
| Nueva Ecija | 86.8 | 93.2 | 90.5 |
| Pampanga | 81.9 | 91.5 | 87.4 |
| Tarlac | 88.2 | 95.3 | 92.5 |
| Zambales | 78.2 | 92.2 | 86.7 |
| Aurora | - | - | 100.0 |



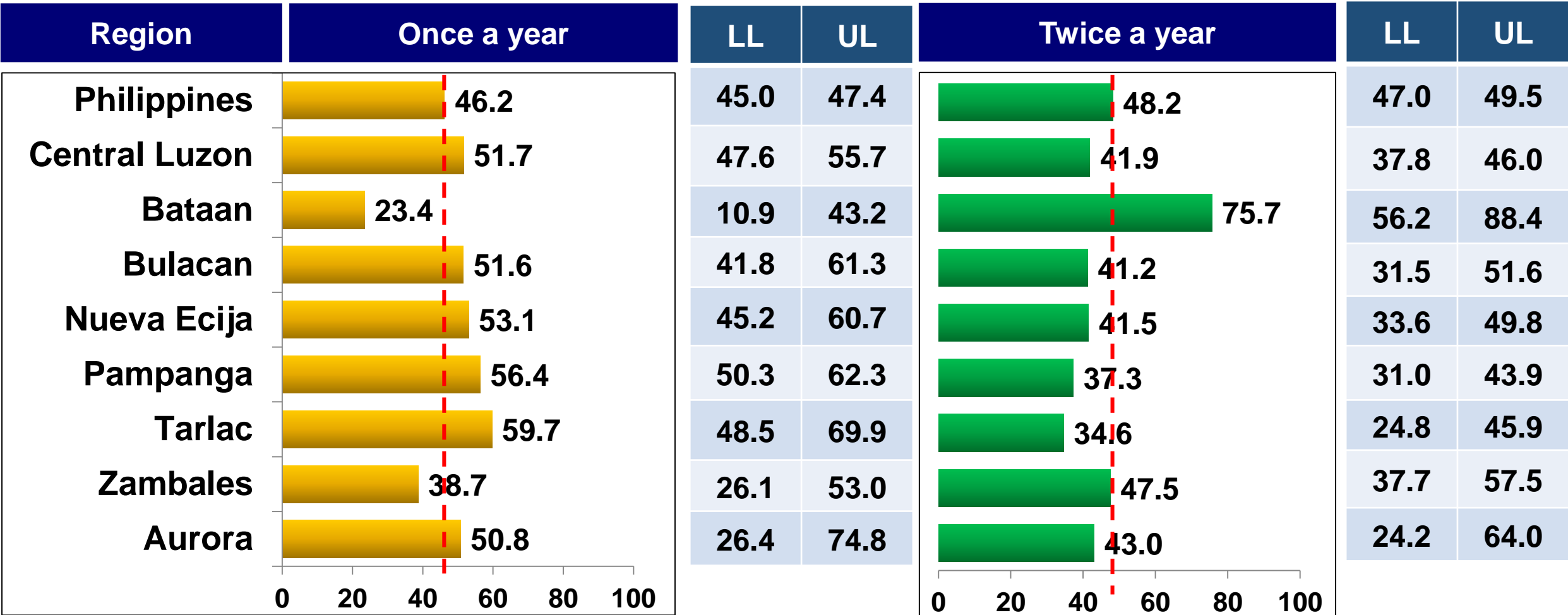
Frequency of participation of children 6-12 years old in deworming by region: Philippines, 2015



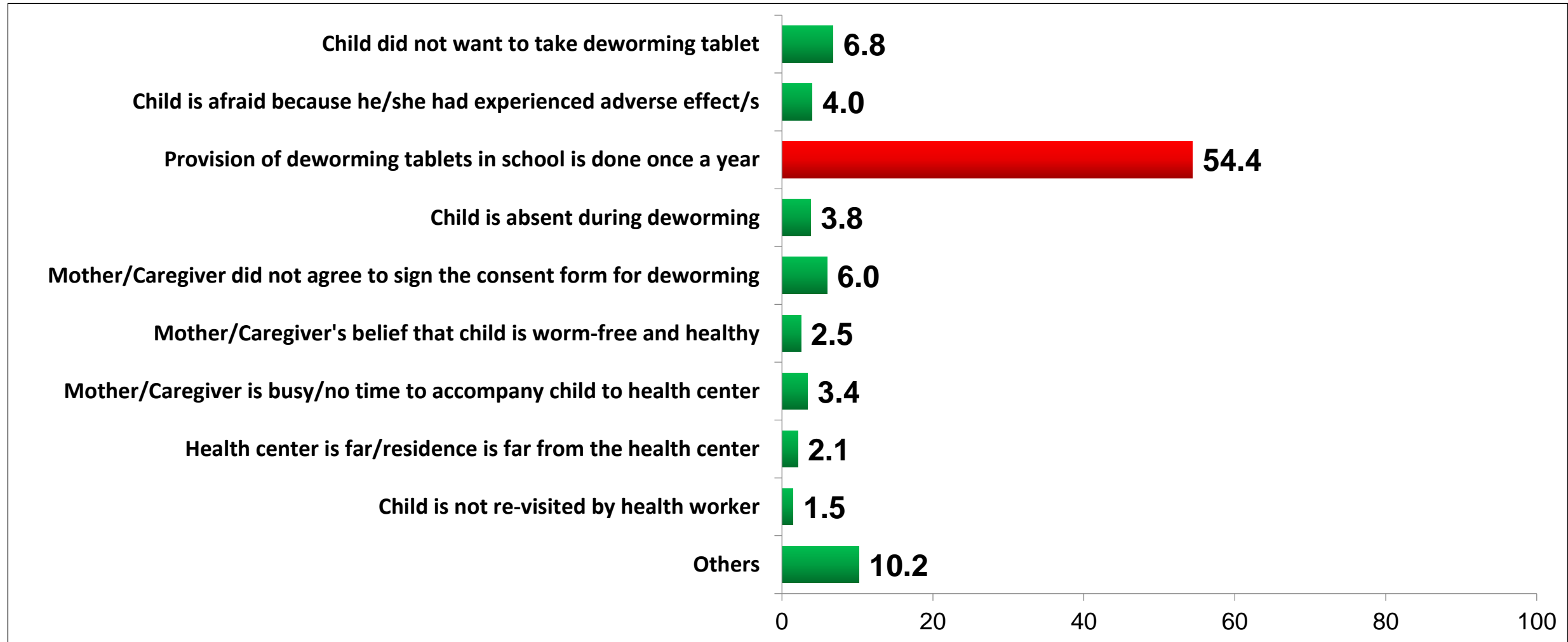
Department of Science and Technology
Food and Nutrition Research Institute



Frequency of participation of children 6-12 years old in deworming in Central Luzon: Philippines, 2015



Proportion of children 6-12 years old who participated **ONCE** in **deworming** due to following reasons: Philippines, 2015



Department of Science and Technology
Food and Nutrition Research Institute



Summary

❑ Newborn Screening

- There was an increase of children, 0-71 months old, who underwent newborn screening from 2013 to 2015 and the increase was statistically significant.
- In Central Luzon, children who underwent newborn screening was highest in Pampanga and lowest in Zambales.



Department of Science and Technology
Food and Nutrition Research Institute



Summary

❑ Expanded Program on Immunization

- In general, 6 out of 10 children, 12-23 months of ages were fully immunized.
- In Central Luzon, higher percentage of children who are fully immunized was noted in Nueva Ecija and Aurora, and lowest in Zambales.

❑ Vitamin A Supplementation

- 7 out of 10 children participated in Vitamin A Supplementation.
- In Central Luzon, highest percentage was observed in Zambales.



Summary

❑ Micronutrient Supplementation

- 4 out of 10 children have tried the Micronutrient Powder (MNP) among those mothers who are aware of MNP.



Department of Science and Technology
Food and Nutrition Research Institute



Summary

❑ Deworming

- 12 to 71 months
 - ✓ For the entire Philippines, 5 out of 10 children were dewormed.
 - ✓ In Central Luzon, Aurora had the most number of dewormed children.
- 6 to 12 years old
 - ✓ A significant increase of dewormed children was noted between 2013 to 2015 survey period.
 - ✓ A good picture of participation in deworming program was noted for the whole Philippines.
 - ✓ In Central Luzon, 100% of children in Aurora was dewormed and the lowest percentage was noted in Bulacan.



THANK YOU!!



Department of Science and Technology
Food and Nutrition Research Institute

