| Sl No. | CONTENT | PAGE |
| :---: | :---: | :---: |
|  | Forward | 1 |
|  | Year on Year Inflation Rate | 2 |
|  | 3 Period to Period Inflation Rate | 2 |
|  | Purchasing Power of Ngultrum | 2 |
|  | Inflation Rate by Major components (Year on Year) | 3 |
|  | Inflation Rate by Major components (Period to Period) | 4 |
|  | Inflation Rate by sub Major components (Year on Year) | 5 |
|  | Inflation Rate by sub Major components (Year on Year) | 6 |
|  | Table 1:Inflation rate by food and non food components | 7 |
| 10 | Table 2:Index by Major components | 8 |
| 11 | Table 3:Inflation by Major components (Year on Year) | 9 |
| 12 | Table 4:Inflation by Major components (Period to Period) | 10 |
| 13 | 3 Table 5:Index by sub Major components | 1 |
| 14 | Table 6:Inflation by sub Major components (Period to Period) | 12 |
| 15 | Table 7:Inflation by sub Major components (Year on Year) | 13 |
| 16 | Graph 1: Change in Index points | 14 |
| 17 | Graph 2:Year on Year Growth Rate | 15 |
| 18 | Graph 3:Period to Period Growth Rate | 16 |
| 19 | Technical Notes, An Overview | 16 |
| 20 | Technical Notes, Background | 17 |
| 21 | Technical Notes, Rebasing the CPI | 18 |
| 22 | Technical Notes, Base Period | 18 |
| 23 | Technical Notes, Weights | 18 |
| 24 | Technical Notes, Weights | 19 |
| 25 | Technical Notes, Sample Outlets | 19 |
| 26 | Technical Notes, Pricing period and Procedures | 19 |
| 27 | Technical Notes, Survey forms | 20 |
| 28 | Technical Notes, Index construction | 20 |

## FOREWORD:

The Consumer Price Index (CPI) measures the changes over time in the average retail price of a fixed basket of consumer commodities and services generally purchased by households for personal consumption. The year - on - year rate of change of the CPI is widely used as an indicator to measure the changes in prices.

The current bulletin is based on the re-based price i.e. $3^{\text {rd }} \mathrm{Qtr} 2003$.
However, during the $3^{\text {rd }}$ Qtr. 2003 and $1^{\text {st }}$ Qtr. 2004, year- on-year rate of change of the CPI could not be calculated. Comparisons cannot be made because there is no quarterly index produced for $3{ }^{\text {rd }}$ quarter of the previous year.

The half yearly bulletins published in the previous years are considered as: $1^{\text {st }}$ half as $2^{\text {nd }}$ quarter and $2^{\text {nd }}$ half as $4^{\text {th }}$ quarter.

CONSUMER PRICE INDEX
(2003=100)
1st Qtr 2006

## YEAR - ON - YEAR INFLATION RATE:

Year on year Inflation rate in Bhutan went up by 3.13 percent. The downward trend of the inflation rate was primarily brought about by the 3.58 percent growth in the prices of non- food and 2.13 percent in food items.

## PERIOD TO PERIOD (QUARTER-TO-QUARTER) INFLATION RATE:

Quarter-to-quarter national Inflation accelerated by 1.41 percent this quarter. The increase in prices during this quarter was mainly brought about by the jump in the prices of non- food item by 1.67 percent and prices of food items increased by 0.84 percent this quarter.

## PURCHASING POWER OF NGULTRUM (PPN):

The PPN for the nation as measured by CPI is recorded at 89 Chheltrum as of 1st quarter 2006. This indicates that 100 Ngultrum of 1st quarter 2006 is worth only 89 Ngultrum of $3^{\text {rd }}$ Quarter 2003.

## PERIOD TO PERIOD INFLATION RATE FOR THIMPHU FOOD

## PRICE INDEX:

Quarter to Quarter inflation rate in Thimphu capital town declined by $0.98 \%$ during this quarter.This dropped was due to slight fall in prices of vegetable.

## YEAR ON YEAR INFLATION RATE BY MAJOR COMPONENTS:

Transport registered an increase in price by 8.87 percent due to increase in the cost for purchase of vehicles by 5.65 percent and the prices for fuels and lubricants increased by 7.08 percent.

Miscellaneous goods and services increased by 8.84 percent due to increase in prices of personal services by 26.14 percent and personal care effects by 1.30 percent.

Inflation rate of restaurants and hotels increased by 8.29 percent. The increase in restaurants and hotels is mainly due to jump in prices of catering services by 7.25 percent and the charge of accommodation services by 10.42 percent.

The prices of clothing and footwear increased by 6.58 percent due to increase in prices of clothing by 6.16 percent and footwear by 7.88 percent.

Alcoholic beverages, tobacco and narcotics prices increased by 3.72 percent due to increase in prices of spirits by 1.05 percent, tobacco by 14.55 percent and narcotics by 1.64 percent.

Inflation rate for housing, water, electricity, gas and other fuels increased by 2.88 percent. The increases in prices of actual and imputed rental for housing by 2.72 percent, electricity, gas and other fuel by 3.57 percent contributed to the overall increase in the price of the housing, water, electricity, gas and other fuels.

## Furnishing, household equipment and routine household maintenance

increased by 2.28 percent due to the increase in prices of household textiles by 4.60 percent, household appliances by 9.71 percent and goods \& services for routine household maintenance by 1.68 percent.

Health increased by 2.02 percent. This is due to the increase in prices of pharmaceutical products by 0.71 percent, and other medical product increased by 3.14 percent.

Food and non - alcoholic beverages increased by 2.00 percent because of the increase in prices of food by 1.91 percent and non - alcoholic beverages by 3.56 percent.

Meanwhile, the prices of communication dropped by 9.08 percent due to reduction in price of Internet services by 9.58 percent.

## PERIOD-TO-PERIOD INFLATION RATE BY MAJOR COMPONENTS:

Communication: accelerated by 2.53 percent during this quarter.This was due to increase in price of telephone and telefax services by 2.70 percent.

Housing, water, electricity, gas and other fuels increased by 2.42 percent. The increase was due to rise in prices of actual and imputed rental for housing by 2.25 percent and electricity, gas and other fuels by 2.87 percent.

Furnishing, household equipments and routine household maintenance increased by 2.40 percent.The increase was due to rise in cost of goods and services for routine household maintenance by 1.26 , tools and equipment for house and garden by 1.58 percent and furniture and furnishing by 11.85 percent.

Health :increased by 2.35 percent during this quarter.This was due to increase in prices of pharmaceutical products by 2.04 percent and other medical products by 2.61 percent.

Miscellaneous goods and services increased by 1.77 percent. This was due to increase in prices of personal services by 2.52 percent, personal care items by 1.90 percent and personal care effects by 1.04 percent.

Transport jumped by 0.95 percent. This was mainly due to increase in cost for purchase of vehicles by 0.56 percent and fuels and lubricants for personal transport by 1.28 percent.

Food and non - alcoholic beverages increased by 0.85 percent because of the jump in cost of food items by 0.86 percent and the prices of non - alcoholic beverages increased by 0.86 percent due to increase in seasonal demand.

Inflation rate of restaurants and hotels registered an increased in prices by 0.72 percent during this period. This was due to increase in prices of accommodation services by 1.96 percent and the catering services by 0.10 percent.

Alcoholic beverages, tobacco and narcotics increased by 0.60 percent. The jump is mainly due to rise in prices of narcotics by 0.31 percent, tobacco by 0.55 percent and in spirits by 2.83 percent.

Clothing and footwear prices increased by 0.45 percent. The prices of Clothing increased by 0.34 percent and footwear marked an increase of 0.79 percent.

## YEAR ON YEAR INFLATION RATE BY SUB-MAJOR COMPONENTS:

Personal care: increased by 8.84 percent due to increase in prices of personal care effects by 1.30 percent and personal services by 26.14 percent.

Under the sub-major component, the increase in the prices of other components was mainly due to increase in prices of fuels and lubricants by 7.08 percent, narcotics by 1.64 percent, non-alcoholic beverages by 6.56 ,coffee, tea and cocoa by 3.37 , and bread and cereals by 0.91 percent respectively.

Fruits: prices decreased by 6.85 percent because of the fall in prices of fresh or chilled fruits.

Clothing increased by 6.16 percent because of the increase in prices of men's clothing by 8.79 percent and garments by 5.97 percent.

Food products increased by 5.70 percent due to increase in prices of chilli powder by 0.18 percent, Indian spices by 1.32 percent and other spices by 9.37 percent.

The prices of Meat increased by 5.42 percent. This was due to rise in prices of lamb, mutton, goat and chicken by 3.76 percent.

The prices of Sugar, jams, honey, chocolates and confectionary increased by 4.77 percent. The increase in prices of jams, marmalades and honey by 3.79 percent and sugar by 4.84 percent attributed to the increase in the overall prices.

Electricity, gas and other fuels increased by 3.57 percent because of the increase in prices of electricity and other fuels.

The prices of actual rentals for housing increased by 2.72 percent, this was due to increase in prices of house rent and maintenance and repair of dwellings.

Vegetables: prices increased by 2.67 percent because of the increase in prices of fresh or chilled vegetables by 2.39 percent and fresh or chilled potatoes by 4.67 percent.

Milk, cheese and eggs increased by 2.43 percent. The increase in prices of fresh milk by 0.29 percent, egg and egg based products by 6.21 percent and preserved milk and other milk products by 2.32 percent attributed to the rise in the overall prices of diary products.

Alcoholic beverages increased by 0.81 percent due to increases in prices of wines by 1.91 percent and spirits by 1.05 percent.

Fruits increased by 17.13 percent due to rise in prices of fresh or chilled fruits.

The price of accommodation services during this quarter increased by 1.96 percent.

Personal care increased by 1.77 percent this quarter due to rise in prices of personal services by 2.52 percent.

Non-food increased by 1.67 percent due to increase in prices of maintenance and repair of dwelling by 6.83 percent and furniture and furnishing by 11.85 percent.

Meat :prices increased by 1.58 percent this quarter due to increase in prices of beef by 2.94 percent and pork by 0.37 percent.

Food products increased by 1.39 percent this quarter. The rise was due to increase in prices of salt by 5.69 percent, dried chilies by 1.50 percent and Indian spices by 1.08 percent

In other categories, fuels and lubricants increased by 1.28 percent, poultry by 0.90 percent. The alcoholic beverages increased by 0.79 percent and actual rentals for housing increased by 2.25 percent.

Fish: prices increased by 1.19 percent this quarter due to increase in prices of fresh,chilled or frozen fish and seefood by 1.67 percent.

Non - alcoholic beverages increased by 0.86 percent due to increase in prices of mineral water, soft drinks, fruit \& vegetable juices by 0.53 percent and coffee, tea and cocoa by 1.30 percent

Milk, cheese and eggs increased by 0.66 percent because of the increase in prices of other milk products and cheese and other preserved products.

Clothing_prices increased by 0.34 percent because of the increase in prices of garments by 0.35 percent.

Inflation rate of narcotics marked an increase of 0.31 percent and tobacco by 0.55 percent.
TABLE 1. CONSUMER PRICE INDEXES- FOOD AND NON FOOD COMPONENTS, BHUTAN JUNE 2002 TO 1st Orr. 2006.
9008




 | EQUIPTMENT \& ROUTNE | 5.68 | 91.20 | 96.79 | 97.49 | 100.00 | 103.35 | 104.15 | 103.59 | 103.56 | 105.99 | 107.36 | 106.43 | 107.18 | 107.24 | 109.81 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |








 NOTE: From 2003 June and backwards, the HEALTH component is indusive of Transport, Communication, Recreation \& Culture, Education Restaurants and hotels. Therefore the weights may be aggregated at 23.7 , if Indexes needs to be backtracked.

| YEAR ON YEAR GROWTH RATE(\%) | Wbght |  |  | 2003 |  |  |  |  |  |  |  |  |  |  | 2006 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ттем |  | 2002 |  |  |  |  | 2004 |  |  |  | 2005 |  |  |  |  |
|  |  | JUNE | DEC | JUNE 3 | 3 rd Qtr | 4th | st Ar | 2nd Qr 3 | rrd 0 | 4th | arr | ndatr | 3 rd Otr | 4th Otr | 1st Atr. |
| 3rd Otr. 2003=100 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FOOD AND NON- ALCOHOLIC BEVE | 29.44 | 2.34 | 2.15 | 1.87 | 0.00 | 1.26 | 0.00 | 0.68 | 2.91 | 2.69 | 5.60 | 5.79 | 5.34 | 4.54 | 2.00 |
| ALCOHOLIC BEVERAGES, TOBACCO \& NARCOTICS | 2.23 | 1.82 | -0.30 | -4.96 | 0.00 | 4.90 | 0.00 | 10.98 | 2.02 | 3.28 | 12.09 | 12.13 | 10.20 | 11.33 | 3.72 |
| CLOTHNG ANDFOOTWEAR | 10.49 | 3.67 | 2.45 | 1.52 | 0.00 | 6.95 | 0.00 | 5.18 | 5.23 | 2.61 | 1.44 | 5.61 | 4.82 | 4.52 | 6.58 |
| HOUSING, WATRR, EECTRICITY, GAS \& Other fuels | 25.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.29 | 6.90 | 9.30 | 9.23 | 9.68 | 9.42 | 2.88 |
| EQUIPTMENT \& ROUTINE HOUSEHOLD MAINTENANCE | 5.68 | 5.07 | 4.37 | 6.90 | 0.00 | 6.78 | 0.00 | 6.26 | 3.56 | 2.55 | 3.08 | 2.7 | 3.50 | 1.18 | 2.28 |
| HEALTH | 2.94 | 4.19 | 0.35 | -0.18 | 0.00 | 11.47 | 0.00 | 11.50 | 1.43 | 5.95 | 4.34 | 5.76 | 4.90 | 0.03 | 2.02 |
| TRANSPORT | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.74 | 2.46 | 1.50 | 4.87 | 4.4 | 6.97 | 8.87 |
| COMMUNICATION | 4.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -1.75 | -0.63 | -2.02 | -10.33 | -10.85 | -12.41 | $-9.08$ |
| RECREATION AND CULTURE | 2.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.97 | 0.74 | 4.38 | -3.37 | 0.65 | -0.53 | 1.58 |
| EDUCATIon | 4.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESTAURANTS AND HOTES | 3.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.60 | 15.51 | 7.83 | 7.68 | 4.25 | 0.36 | 8.29 |
| MISCCLLANEOUS GOODS \& SERVIC | 2.72 | 2.26 | -0.52 | 1.41 | 0.00 | 2.54 | 0.00 | 0.00 | -0.13 | 14.99 | 7.20 | 3.41 | 10.05 | 0.38 | 9.24 |
| TOTAL | 100.00 | 2.68 | 2.28 | 1.84 | 0.00 | 3.36 | 0.00 | 0.00 | 4.55 | 3.91 | 5.37 | 5.46 | 5.49 | 4.93 | 3.13 |

TABLE 4. CONSUMER PRICE INEXES
TABLE 4. CONSUMER PRICE INDEXES - MAJOR COMPONENTS, BHUTAN JUNE 2002 TO 1st Qtr. 2006.

| ITEM | W日GFT | 2002 |  | 2003 |  |  | 2004 |  |  |  | 2005 |  |  | 2006 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | JUNE | DEC | JUNE | 3rd Otr. 4 | 4th Qrr. | 1st Qtr.2 | 2nd $\operatorname{ar} 3$ | 3rd Orr. 4 | 4th Cr. 1 | 1st Qrr. 2 n | ndQtr | 3rd Qtr | 4th Otr | 1st Qtr. |
| 3rd Qtr. 2003=100 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FOOD AND NON- ALCOHOUC BEVEF | 29.44 | 0.57 | 1.57 | 0.29 | -0.45 | 1.42 | 0.52 | -0.80 | 1.76 | 1.20 | 3.37 | -0.62 | 1.33 | 0.43 | 0.85 |
| ALCOHOUC BEVERAGES, TOBACCO \& NARCOTICS | 2.23 | -1.73 | 1.45 | -6.32 | 10.74 | 1.12 | -0.49 | -0.40 | 1.80 | 2.37 | 7.99 | -0.35 | 0.04 | 3.42 | 0.60 |
| CLOTHING AND FOOTWEAR | 10.49 | 1.21 | 1.22 | 0.30 | 1.64 | 4.91 | -0.35 | -1.01 | 1.69 | 2.30 | -1.49 | 3.06 | 0.92 | 2.01 | 0.45 |
| HOUSING,WATER,ELECTRICITY,GAS \&OTHERFUES | 25.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 | 6.54 | 0.04 | -0.13 | 0.44 | 8.93 | -0.03 | 0.28 | 0.20 | 2.42 |
| EQUIPTMENT \& ROUTINE HOUSEHOLD MANIENANCE | 5.68 | -1.66 | 6.13 | 0.72 | 2.57 | 3.35 | 0.77 | -0.54 | -0.03 | 2.35 | 1.29 | -0.87 | 0.70 | 0.06 | 2.40 |
| HEALTH | 294 | 0.36 | -0.01 | -0.17 | 11.21 | 0.40 | 1.89 | -1.99 | 1.17 | 4.87 | 0.35 | -0.67 | 0.35 | 0.00 | 2.35 |
| TRANSPORT | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 7.04 | 0.12 | -0.46 | 3.81 | -0.97 | -0.81 | 2.84 | 3.35 | 1.46 | 0.95 |
| COMMUNICATON | 4.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.19 | -0.71 | -1.85 | 1.78 | -1.22 | -9.13 | -2.42 | 0.00 | 2.53 |
| RECREATION ANDCULTURE | 262 | 0.00 | 0.00 | 0.00 | 0.00 | 4.44 | -4.66 | 3.57 | 0.82 | 1.19 | -1.22 | -4.12 | 5.02 | 0.00 | 0.88 |
| EDUCATION | 4.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESTAURANTS AND HOTES | 3.01 | 0.00 | 0.00 | 0.00 | 0.00 | $-0.65$ | -0.01 | 1.76 | 5.45 | 7.65 | -6.66 | 1.62 | 2.09 | 3.64 | 0.72 |
| MISCELLANEOUS GOODS \& SERVICI | 272 | -0.67 | 0.14 | 1.26 | -0.11 | 1.37 | 0.32 | 4.25 | -5.79 | 16.72 | -6.49 | 0.56 | 0.26 | 6.46 | 1.77 |
| TOTAL | 100.00 | 0.52 | 1.75 | 0.09 | 1.22 | 2.02 | 1.76 | -0.23 | 0.94 | 1.40 | 3.19 | -0.14 | 0.96 | 0.86 | 1.41 |

$$
2006
$$ $\frac{06601}{40151}$





TABLE 7．CONSUMER PRICE INDEXES－SUB－COMPONENTS，BHUTAN JUNE 2002 TO 1st Atr． 2006.
YEAR ON YEAR GROWTH RATE：


 $\underset{\sim}{\circ}$
悹

$$
\hat{B}
$$

TOTAL

1
－
GRAPH 1:CHANGE IN INDEX POINTS.

GRAPH 2: YEAR ON YEAR INFLATION RATE.



## TECHNICAL NOTES

## AN OVERVIEW.

The Consumer Price Index (CPI) is a single number used to measure changes in the average retail prices of a market basket or collection of goods and services commonly purchased by an average household in Bhutan. It shows how much, on the average, prices of goods and services have increased or decreased from a particular reference period known as base year. It has been produced in June and December each year since 1979. With the re-basing of base year from 1979 to 2003, henceforth the bulletin will be published on quarterly basis.

The CPI plays an important role in national policy making, both in the economic and in the social sphere. It is used for a wide variety of purposes. The CPI is the best and most widely used measure of the rate of inflation. It is the indicator of the performance of the economy and a basis for redirecting monetary and fiscal policies in a country. A popular function is the use of CPI for indexation of wages and social security allowances (the adjustment of workers' income in the form of wages and salaries, or as social security benefits (e.g. pensions). Besides these, CPI is used as a deflator to express value series in real terms, that is, measuring the change in actual volume of transaction by removing the effects of price changes.

## BACKGROUND

The National Statistical Bureau (NSB) CPI dates back to 1979. Two price index were produced and these are:

1. The main CPI for Bhutan.

This series was based on price collection undertaken in 17 towns throughout Bhutan in June and December each year since June 1979. The Price Indexes were calculated by first obtaining the average prices for each individual item across all towns. These averages were determined as weighted averages based on the estimated population of each town. These national average prices were then weighted together to form price indexes at the group level. Item weights were based on the importance of each item in the spending patterns of the population. Finally, indexes at the group level were weighted together to form total indexes using the weights that were likewise based on the importance of each group in the expenditure of the population. The weights used were based on information given in a Survey of Consumer Expenditure undertaken in 1979.

## 2. The quarterly Food price index of Thimphu.

This was initiated in July 1987 originally as a monthly series. But has been compiled as a quarterly series from the June quarter 1988. The index referred to the average price during the quarter and was based on the collection of prices for a number of food items from a selection of shops in Thimphu. Prices of fruits and vegetables were collected once a month from the fruit and vegetable market.

## REBASING THE CPI.

The CPI derives its usefulness in its representation of how much a typical market basket behaves over a specific time period. When the basket of the reference year no longer represents what household commonly purchases, the CPI becomes irrelevant and would tend to give wrong market signals.
Bhutan's CPI has 1979 as base year. Undoubtedly, substantial changes had taken place since then - economically, socially and technologically. A number of new products had likewise emerged. These factors contributed to the change in households' tastes and preferences thereby causing the fixed market basket of goods and services to become outmoded. To capture such changes for a more meaningful price comparison, it was necessary to re - base the CPI. This entailed the revision of or updating the base year, the weights, the fixed market basket and the sample outlets.

## BASE PERIOD.

The base period is the period, usually a year, at which the index number is set to 100 (but it could be any number: 1,000 or 1 or anything else). 100 is usually selected since it facilitates the calculation of percentage changes from the base to the current period.
The year 2003 was chosen as the base year since it was the year when the Bhutan Living Standard Survey was conducted. The Household Income Expenditure Survey or Living Standard Survey are the usual source of weights and the basis for drawing up the market basket.

## WEIGHTS.

The weights consider the relative importance of each index item in the total index. CPI
Weighting patterns, as well as the market basket, are typically constructed from data on household expenditure or living standard surveys. The present CPI weights are derived from the Bhutan Living Standard Survey (BLSS) 2003 of the National Statistical Bureau (NSB). The survey gathered, among others, income and expenditure data, which included the levels of consumption by item of expenditure up to the level necessary for the generation of CPI weights.

## MARKET BASKET.

A market basket refers to a sample of goods and services that is used to represent all goods and services bought. In constructing the market basket, items are first combined into groups of similar commodities. The commodity groups selected for the CPI are:

```
Food and Non-Alcoholic Beverages.
Alcoholic Beverages, Tobacco and Narcotics.
3. Clothing and Footwear.
4. Housing, Water, Electricity, Gas and Other fuels.
5. Furnishing, Household equipment and Routine Household
    maintenance.
    Health.
    Transport.
    Communication.
    . Recreation and Culture.
10. Education.
11. Restaurant and hotels.
12. Miscellaneous goods and services.
```


## SAMPLE OUTLETS.

These are establishments or retail outlets where prices of commodities/services are collected or quoted. These include shops, footwear stores, tailoring shops, hotel bars, hairdressers, etc. Outlets are selected according to set of criteria that takes into account location, popularity of the establishment along the line of goods to be priced, consistency and completeness of stock and permanency of the outlet.

## PRICING PERIODS AND PROCEDURES.

The accuracy of any statistics depends upon the reliability of the basic information collected. This is especially true for the CPI. While it is necessary to have reliable weighting systems and compilation methods, collecting the basic price information in an accurate and methodical fashion is equally important. Prices of all agricultural items, as these are more volatile, are collected monthly during the first Saturday of the month. Prices of all other items are gathered during the first week of the $2^{\text {nd }}$ month of every quarter.
School fees and related charges are taken once a year, every beginning of the school year and accounts for the annual fees. The entry is carried out all through the succeeding quarters until the next school year.

CPI price collection is conducted by personal visit by our Statistical Officers in the Dzongkhags

## SURVEY FORMS.

The survey forms of retail prices of commodities and services are as follows:

1. Form CPI $1=$ Agricultural products.
2. Form CPI $2=$ Fresh fish and meat.
3. Form CPI 3 = Processed food and non - alcoholic beverages.
4. Form CPI 4 = Alcoholic beverages, cigarettes and non- food.
5. Form CPI $5=$ Fuel, electricity, transportation, communication \& school fees
6. Form CPI $6=$ Monthly rentals.

## INDEX CONSTRUCTION.

The average prices of a commodity from results of the price surveys are gathered. This is just the arithmetic mean (sum of all the prices taken divided by the number of quotations).

The price relative is computed for each of the specifications. The price relative is the simplest form of an index number. Price relative is current average price divided by base year average price multiplied by 100 .

Index are computed at 4-digit group level as the simple average of the price relative belonging to that group.

The index for the 3-digit group is computed as the weighted average of the 4digit group indexes belonging to that group. Like wise for 2-digit and 1-digit group, the similar formula is used.

The overall index is computed by getting the weighted average of the indexes of the 12 major group items

The national index is the weighted average of all indexes of the 23 towns.

| Sl No. | CONTENT | PAGE |
| ---: | :--- | ---: |
|  | 1 | Forward |
| 2 | Year on Year Inflation Rate | 1 |
| 3 | Period to Period Inflation Rate | 2 |
| 4 | Purchasing Power of Ngultrum | 2 |
| 5 | Inflation Rate by Major components (Year on Year) | 3 |
| 6 | Inflation Rate by Major components (Period to Period) | 4 |
| 7 | Inflation Rate by sub Major components (Year on Year) | 5 |
| 8 | Inflation Rate by sub Major components (Year on Year) | 6 |
| 9 | Table 1:Inflation rate by food and non food components | 7 |
| 10 | Table 2:Index by Major components | 8 |
| 11 | Table 3:Inflation by Major components (Year on Year) | 9 |
| 12 | Table 4:Inflation by Major components (Period to Period) | 10 |
| 13 | Table 5:Index by sub Major components | 11 |
| 14 | Table 6:Inflation by sub Major components (Period to Period) | 12 |
| 15 | Table 7:Inflation by sub Major components (Year on Year) | 13 |
| 16 | Graph 1: Change in Index points | 14 |
| 17 | Graph 2:Year on Year Growth Rate | 15 |
| 18 | Graph 3:Period to Period Growth Rate | 16 |
| 19 | Technical Notes, An Overview | 16 |
| 20 | Technical Notes, Background | 17 |
| 21 | Technical Notes, Rebasing the CPI | 18 |
| 22 | Technical Notes, Base Period | 18 |
| 23 | Technical Notes, Weights | 18 |
| 24 | Technical Notes, Weights | 19 |
| 25 | Technical Notes, Sample Outlets | 19 |
| 26 | Technical Notes, Pricing period and Procedures | 19 |
| 27 | Technical Notes, Survey forms | 20 |
| 28 | Technical Notes, Index construction | 20 |

## FOREWORD:

The Consumer Price Index (CPI) measures the changes over time in the average retail price of a fixed basket of consumer commodities and services generally purchased by households for personal consumption. The year - on - year rate of change of the CPI is widely used as an indicator to measure the changes in prices.

The current bulletin is based on the re-based price i.e. 3 ${ }^{\text {rd }} \mathrm{Qtr}$ 2003.
However, during the $3^{\text {rd }}$ Qtr. 2003 and $1^{\text {st }}$ Qtr. 2004, year- on-year rate of change of the CPI could not be calculated. Comparisons cannot be made because there is no quarterly index produced for $3{ }^{\text {rd }}$ quarter of the previous year.

The half yearly bulletins published in the previous years are considered as: $1^{\underline{\text { st}}}$ half as $2^{\text {nd }}$ quarter and $2^{\text {nd }}$ half as $4^{\frac{\text { nin }}{}}$ quarter.

## CONSUMER PRICE INDEX <br> (2003=100) <br> 2nd Otr 2006

## YEAR - ON - YEAR INFLATION RATE:

All Bhutan year on year Inflation rate went up by 6.17 percent. The upward trend of the inflation rate was primarily brought about by the 6.76 percent growth in the prices of food and 5.90 percent in non- food items.

## PERIOD TO PERIOD (OUARTER-TO-OUARTER) INFLATION RATE:

Quarter-to-quarter national Inflation rate accelerated by 2.81 percent this quarter. The increase in prices during this quarter was mainly brought about by the jump in the prices of food item by 3.91 percent and prices of non- food items increased by 2.32 percent this quarter.

## PURCHASING POWER OF NGULTRUM (PPN):

The PPN for the nation as measured by CPI is recorded at 86 Chheltrum as of 2nd quarter 2006. This indicates that 100 Ngultrum of 2 nd quarter 2006 is worth only 86 Ngultrum of $3{ }^{\text {rd }}$ Quarter 2003.

## YEAR ON YEAR INFLATION RATE FOR THIMPHU FOOD PRICE INDEX:

Year on year inflation rete of Thimphu food price index has been increased by 5.89 percent.This hike was due to rise in prices of bread and cereals,other cereals,flour and cereals products, vegetables and fruits.

## PERIOD TO PERIOD INFLATION RATE FOR THIMPHU FOOD

 PRICE INDEX:Quarter to Quarter inflation rate in Thimphu capital town accelerated by $7.26 \%$ during this quarter.This increased was due to hike in prices of eggs,Vegetables and seasonal fruits.

## YEAR ON YEAR INFLATION RATE BY MAJOR COMPONENTS:

Miscellaneous goods and services increased by 12.91 percent due to increase in prices of personal services by 32.78 percent and personal care items by 6.80 percent.

Recreation and culture increased by 12.10 percent. This is due to increase in the prices of recreation and cultural services 15.27 and newspapers,books and stationaries by 1.79 percent.

Transport registered an increase in price by 8.13 percent mainly due to hike in the prices of fuels and lubricants by 8.11 percent.

Alcoholic beverages, tobacco and narcotics prices increased by 7.83 percent due to increase in prices of spirits by 3.36 percent, tobacco by 14.36 percent and narcotics by 10.11 percent.

The prices of clothing and footwear increased by 6.99 percent due to increase in prices of clothing by 8.06 percent and footwear by 3.80 percent.

Inflation rate of restaurants and hotels increased by 6.84 percent. The increase in restaurants and hotels is mainly due to jump in prices of catering services by 3.29 percent and the charge of accommodation services by 14.65 percent.

Food and non - alcoholic beverages increased by 6.67 percent because of the increase in prices of food by 6.94 percent and non - alcoholic beverages by 2.43 percent

## Furnishing, household equipment and routine household maintenance

 increased by 5.77 percent due to the increase in prices of household textiles by 13.30 percent, glassware, tableware and household utensils by 1.46 percent and goods \& services for routine household maintenance by 3.79 percent.Inflation rate for housing, water, electricity, gas and other fuels increased by 4.89 percent. The increases in prices of actual and imputed rental for housing by 5.12 percent, electricity, gas and other fuel by 4.06 percent contributed to the overall increase in the price of the housing, water, electricity, gas and other fuels.

Health increased by 3.36 percent. This is due to the increase in prices of pharmaceutical products by 3.41 percent, and other medical product increased by 3.31 percent.

## PERIOD-TO-PERIOD INFLATION RATE BY MAJOR COMPONENTS:

Recreation and Culture prices increased by 5.82 percent.The increase was due to rise in price of recreation and cultural services by 7.19 percent.

Miscellaneous goods and services increased by 3.94 percent.This was due to increase in prices of personal services by 5.27 percent, personal care items by 3.79 percent and personal care effects by 2.93 percent

Food and non - alcoholic beverages increased by 3.93 percent because of the jump in cost of food items by 4.12 percent and the prices of non - alcoholic beverages increased by 0.86 percent due to increase in seasonal demand.

Communication: accelerated by 3.92 percent during this quarter.This was due to increase in price of telephone and telefax services by 4.16 percent.

Alcoholic beverages, tobacco and narcotics increased by 3.60 percent. The jump is mainly due to rise in prices of narcotics by 6.63 percent, beer by 3.10 percent and in wine by 4.27 percent.

Clothing and footwear prices increased by 3.45 percent. The prices of Clothing increased by 4.41 percent and footwear marked an increase of 0.58 percent.

Housing, water, electricity, gas and other fuels increased by 1.93 percent. The increase was due to rise in prices of actual and imputed rental for housing by 2.34 percent, electricity, gas and other fuels by 0.78 percent and maintenance and repair of dwelling by 1.04 percent.

Furnishing, household equipments and routine household maintenance increased by 2.51 percent.The increase was due to rise in cost of goods and services for routine household maintenance by 1.26 , tools and equipment for house and garden by 2.29 percent and household textiles by 12.64 percent.

Health : increased by 0.63 percent during this quarter.This was due to increase in prices of pharmaceutical products by 1.19 percent and other medical products by 0.16 percent.

Transport jumped by 2.14 percent. This was mainly due to hike in the prices of fuels and lubricants for personal transport by 5.04 percent.

Inflation rate of restaurants and hotels registered an increased in prices by 0.25 percent during this period. This was due to increase in prices of accommodation services by 0.71 percent and the catering services by 0.03 percent.

## YEAR ON YEAR INFLATION RATE BY SUB-MAJOR COMPONENTS:

Vegetables: prices increased by 15.77 percent because of the increase in prices of fresh or chilled vegetables by 17.32 percent and fresh or chilled potatoes by 15.39 percent.
Personal care: increased by 12.91 percent due to increase in prices of personal care items by 6.80 percent and personal care effects by 4.04 percent.

Under the sub-major component, the increase in the prices of other components was mainly due to increase in prices of narcotics by 10.11 percent, fuels and lubricants by 8.11 percent,coffee, tea and cocoa by 4.87 percent, non-alcoholic beverages by 2.43 percent, and bread and cereals by 2.15 percent respectively.

The prices of Sugar, jams, honey, chocolates and confectionary increased by 9.52 percent. The increase in prices of jams, marmalades and honey by 16.87 percent and sugar by 8.94 percent attributed to the increase in the overall prices.

Food products increased by 8.17 percent due to increase in prices of dried chillies by 10.74 percent, salt by 9.21 percent and other spices by 11.30 percent.

Fruits: prices went up by 8.11 percent because of the rise in prices of fresh or chilled fruits.

Clothing increased by 8.06 percent because of the increase in prices of garments by 8.85 percent and other articles of clothing and clothing accessories by 4.49 percent.
Milk, cheese and eggs increased by 7.69 percent. The increase in prices of eggs by 47.90 percent, preserved milk and other milk product by 2.68 percent attributed to the rise in the overall prices of diary products.

The prices of Meat increased by 7.10 percent. This increase was mainly brought by the rise in prices poultry by 14.32 percent and pork by 7.70 percent.

The prices of actual rentals for housing increased by 5.12 percent, this was due to increase in prices of house rent and maintenance and repair of dwellings by 11.71 percent.

Alcoholic beverages increased by 4.14 percent due to increases in prices of wines by 6.26 percent and spirits by 3.36 percent.

Electricity, gas and other fuels increased by 4.04 percent because of the increase in prices of electricity and other fuels.

Bread and Cereals increased by 2.15 percent due to rise in prices of other cereals ,flour and other cereals product by 5.12 percent.

## PERIOD-TO-PERIOD INFLATION RATE BY SUB-MAJOR COMPONENTS:

Eggs price increased by 44.69 percent this quarter.This increase was due to non existance of the indian eggs in the market and so the existance of local eggs price has gone up.

Vegetable increased by 13.62 percent.This increase was due to increase in prices of fresh or chilled vegetables other than potatoes by 15.97 percent and potatoes by 11.38 percent.

Milk, cheese and eggs increased by 6.67 percent because of the increase in prices of other milk products and eggs.

Inflation rate of narcotics marked an increase of 6.63 percent and tobacco by 0.72 percent.
In other categories, bread increased by 5.64 percent, poultry by 1.23 percent. The alcoholic beverages increased by 3.14 percent, actual rentals for housing increased by 2.34 percent, fish increased by 0.37 percent and oils and fats increased by 0.33 percent.

Fuels and lubricants increased by 5.04 percent this quarter. This was due to hike in prices of fuels and lubricants which contributed to overall rise in inflation rate of a nation.

Clothing_prices increased by 4.41 percent because of the increase in prices of men,women and children garments.

Personal care increased by 3.94 percent this quarter due to rise in prices of personal services by 5.27 percent.

Fruits increased by 2.80 percent due to rise in prices of fresh or chilled fruits
Food products increased by 2.66 percent this quarter. The rise was due to increase in prices of powdered chillies by 1.33 percent, dried chilies by 1.03 percent and salt by 1.89 percent.

Non-food increased by 2.32 percent due to increase in prices of garments by 4.98 percent,actual and imputed rental for housing by 2.34 percent and furniture and furnishing by 2.51 percent.

Non - alcoholic beverages increased by 0.86 percent due to increase in prices of coffee, tea and cocoa by 1.97 percent and mineral water, soft drinks, fruit \& vegetable juices by 0.05 percent.
TABLE 1. CONSUMER PRICEINDEXES-FOOD ANDNONFOODCOMPONENIS, BHUTAN JUNE 2002 TO2nd Or. 2006.
aid



TABLE 2 CONSLMERPRICEINDEXES-MAORCONPONBNS, BHUANJUNE2002 TO2nd Cr. 2006 .

FOODANDNON-ALCOHOUCBEVE $\quad 29.44$ 98.61 100.16100 .45100 .00101 .42101 .95109 .13102 .91104 .15107 .66
 TOBACCO\& NAPCOICS
 sotterfues



 | COMMNCATON | 4.10 | 0.00 | 0.00 | 0.00 | 100.00 | 100.63 | 100.82 | 100.10 | 98.25 | 100.00 | 98.78 | 89.76 | 87.59 | 87.59 | 89.81 | 93.33 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |






 Restaurants and hotels. Therefore the weights may be aggregated at $३ . .7$, if Indexes needs to be backłracked.

## TABLL 3. CONSUMER PRICEINDEXES-MAJOR COMPONENTS, BHUTAN JUNE 2002 TO 2nd Qr.2006.



FOOD AND NON- ALCOHOUC BEVE \begin{tabular}{llllllllllllllllll}
\hline ALCOHOUC BEVERAGES, \& 2.23 \& 1.82 \& -0.30 \& -4.96 \& 0.00 \& 4.90 \& 0.00 \& 10.98 \& 202 \& 3.28 \& 12.09 \& 1213 \& 10.20 \& 11.33 \& 3.72 \& 7.83

 GLOTHNG ANDFOOTWEAR $\quad 10.49$ 

CLOTHNG AND FOOTWEAR \& 10.49 \& 3.67 \& 2.45 \& 1.52 \& 0.00 \& 6.95 \& 0.00 \& 5.18 \& 5.23 \& 2.61 \& 1.44 \& 5.61 \& 4.82 \& 4.52 \& 6.58 \& 6.99 <br>
\hline HOUSING WATER, EECCTRICTY, \& 25.58 \& 0.00 \& 0.0 \& 000 \& 000 \& 0.00 \& 000 \& 0.0 \& 729 \& 6.0 \& 9.30 \& 9.23 \& 9.68 \& \& \& 2.88 <br>
\hline
\end{tabular} GAS\&OTHERPUES

 \begin{tabular}{lllllllllllllllll}
HEALTH \& 294 \& 4.19 \& 0.35 \& 0.18 \& 0.00 \& 11.47 \& 0.00 \& 11.50 \& 1.43 \& 5.95 \& 4.34 \& 5.76 \& 4.90 \& 0.03 \& 2.02 \& 3.36 <br>
\hline

 

TRANSPORT \& 7.06 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 10.74 \& 2.46 \& 1.50 \& 4.87 \& 4.41 \& 6.97 \& 8.87 \& 8.13 <br>
\hline

 

COMMUNCATION \& 4.10 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& -1.75 \& -0.03 \& -2.02 \& -10.33 \& -10.85 \& -12.41 \& -9.08 \& 3.98 <br>
\hline

 

RECREATON ANDCULTURE \& 262 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 3.97 \& 0.74 \& 4.38 \& -3.37 \& 0.65 \& -0.53 \& 1.58 \& 12.10 <br>
\hline

 

EDUCATON \& 4.04 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.05 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 <br>
\hline

 

RESTAURANTS AND HOTES \& 3.01 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 0.00 \& 6.00 \& 15.51 \& 7.83 \& 7.68 \& 4.25 \& 0.36 \& 8.29 \& 6.84 <br>
\hline

 

MSCELLANEOUSGOODS \& SERMCI \& 272 \& 2.26 \& -0.52 \& 1.41 \& 0.00 \& 2.54 \& 0.00 \& 0.00 \& -0.13 \& 14.99 \& 7.20 \& 3.41 \& 10.05 \& 0.38 \& 9.24 \& 12.91 <br>
\hline

 

TOTAL \& 100.00 \& 2.88 \& 2.28 \& 1.84 \& 0.00 \& 3.36 \& 0.00 \& 0.00 \& 4.55 \& 3.91 \& 5.37 \& 5.46 \& 5.49 \& 4.98 \& 3.13 \& 6.17 <br>
\hline
\end{tabular}

| ITEM | WEIGHT | 2002 |  | 2003 |  | 2004 |  |  |  |  |  | 2005 |  | 2006 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | JUNE DEC |  | JUNE 3rd Qr |  | 4th Cr . 1st Cr .2nd Cr |  |  | 3rd Or. 4 | th Cr. 1 s | st Orr 2ndOr |  | 3 rd Cr | 4th Or | st Or. 2nd Otr |  |
| 3rd Cr. 2003=100 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FOOD ANDNON- ALCOHOUC BEVE | 29.44 | 0.57 | 1.5 | 0.29 | -0.45 | 1.42 | 0.52 | -0.80 | 1.76 | 1.20 | 3.37 | -0.62 | 1.33 | 0.43 | 0.85 | 3.93 |
| ALCOHOLC BEVERAGES, TOBACCO\& NARCOTICS | 223 | -1.73 | 1.45 | -6.32 | 10.74 | 1.12 | -0.49 | $-0.40$ | 1.80 | 237 | 7.99 | -0.35 | 0.04 | 3.42 | 0.60 | 3.60 |
| CLOTHNG ANDFOOTWEAR | 10.49 | 1.21 | 1.22 | 0.30 | 1.64 | 4.91 | -0.35 | -1.01 | 1.69 | 230 | -1.49 | 3.06 | 0.92 | 2.01 | 0.45 | 3.45 |
| HOUSING,WATRR,EECTRICTY,GAS \&OTHERFUES | 25.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 | 6.54 | 0.04 | -0.13 | 0.44 | 8.93 | -0.03 | 0.28 | 0.20 | 242 | 1.93 |
| EQUPTMENT \& ROUTIE HOUSEHOLDMAINTENANCE | 5.68 | -1.66 | 6.13 | 0.72 | 2.57 | 3.35 | 0.77 | -0.54 | -0.03 | 235 | 1.29 | -0.87 | 0.70 | 0.06 | 240 | 2.51 |
| HEALTH | 2.94 | 0.36 | $-0.01$ | -0.17 | 11.21 | 0.40 | 1.89 | -1.99 | 1.17 | 4.87 | 0.35 | -0.67 | 0.35 | 0.00 | 235 | 0.6 |
| TRANSPORT | 7.06 | 0.00 | 0.00 | 0.00 | 0.00 | 7.04 | 0.12 | $-0.46$ | 3.81 | -0.97 | -0.81 | 2.84 | 3.35 | 1.46 | 0.95 | 2.14 |
| COMMUNCATION | 4.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.19 | $-0.71$ | $-1.85$ | 1.78 | -1.22 | -9.13 | -242 | 0.00 | 253 | 3.92 |
| RECREATION ANDCULTURE | 2.62 | 0.00 | 0.00 | 0.00 | 0.00 | 4.44 | -4.66 | 3.57 | 0.82 | 1.19 | -1.22 | -4.12 | 5.02 | 0.00 | 0.88 | 5.82 |
| EDUCATION | 4.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.05 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESTAURANTS AND HOTESS | 3.01 | 0.00 | 0.00 | 0.00 | 0.00 | -0.65 | -0.01 | 1.76 | 5.45 | 7.65 | -6.66 | 1.62 | 209 | 3.64 | 0.72 | 0.25 |
| MSCELANEOUS GOODS \& SERMCI | 272 | -0.67 | 0.14 | 1.26 | -0.11 | 1.37 | 0.32 | 4.25 | -5.79 | 16.72 | -6.49 | 0.56 | 0.26 | 6.46 | 1.77 | 3.94 |
| TOTAL | 100.00 | 0.52 | 1.75 | 0.09 | 1.22 | 202 | 1.76 | $-0.23$ | 0.94 | 1.40 | 3.19 | -0.14 | 0.96 | 0.86 | 1.41 | 2.81 |

## 



若


## กั

흘

$\stackrel{M}{c \mid c}$ t．


这

둔 $\underset{\sim}{0}$ $\underset{\sim 1}{\sim}$ $\ddot{\square}$

ACTUAL RENTALS FOR HOUSING

ELECTRATIT，GASANDHERTIS | FUEES AND LUBRICA |
| :--- |
| EDUCATON |
| PERSONAL CARE |


F000
mish
MLK C CHESE ANDEGGS
OILSAN FATS
FRuTr
 FOOOPRPOOUCTS n．e．（ N LCortouc Beveraces Sincluding OBACCO
 PERSOL

気
気





$\stackrel{t}{\square}$



## TECHNICAL NOTES

## AN OVERVIEW

The Consumer Price Index (CPI) is a single number used to measure changes in the average retail prices of a market basket or collection of goods and services commonly purchased by an average household in Bhutan. It shows how much, on the average, prices of goods and services have increased or decreased from a particular reference period known as base year. It has been produced in June and December each year since 1979. With the re-basing of base year from 1979 to 2003, henceforth the bulletin will be published on quarterly basis.

The CPI plays an important role in national policy making, both in the economic and in the social sphere. It is used for a wide variety of purposes. The CPI is the best and most widely used measure of the rate of inflation. It is the indicator of the performance of the economy and a basis for redirecting monetary and fiscal policies in a country. A popular function is the use of CPI for indexation of wages and social security allowances (the adjustment of workers' income in the form of wages and salaries, or as social security benefits (e.g. pensions). Besides these, CPI is used as a deflator to express value series in real terms, that is, measuring the change in actual volume of transaction by removing the effects of price changes.

## BACKGROUND

The National Statistical Bureau (NSB) CPI dates back to 1979. Two price index were produced and these are:

1. The main CPI for Bhutan.

This series was based on price collection undertaken in 17 towns throughout Bhutan in June and December each year since June 1979. The Price Indexes were calculated by first obtaining the average prices for each individual item across all towns. These averages were determined as weighted averages based on the estimated population of each town. These national average prices were then weighted together to form price indexes at the group level. Item weights were based on the importance of each item in the spending patterns of the population. Finally, indexes at the group level were weighted together to form total indexes using the weights that were likewise based on the importance of each group in the expenditure of the population. The weights used were based on information given in a Survey of Consumer Expenditure undertaken in 1979.

## 2. The quarterly Food price index of Thimphu.

This was initiated in July 1987 originally as a monthly series. But has been compiled as a quarterly series from the June quarter 1988. The index referred to the average price during the quarter and was based on the collection of prices for a number of food items from a selection of shops in Thimphu. Prices of fruits and vegetables were collected once a month from the fruit and vegetable market.

## REBASING THE CPI.

The CPI derives its usefulness in its representation of how much a typical market basket behaves over a specific time period. When the basket of the reference year no longer represents what household commonly purchases, the CPI becomes irrelevant and would tend to give wrong market signals.
Bhutan's CPI has 1979 as base year. Undoubtedly, substantial changes had taken place since then - economically, socially and technologically. A number of new products had likewise emerged. These factors contributed to the change in households' tastes and preferences thereby causing the fixed market basket of goods and services to become outmoded. To capture such changes for a more meaningful price comparison, it was necessary to re - base the CPI. This entailed the revision of or updating the base year, the weights, the fixed market basket and the sample outlets.

## BASE PERIOD.

The base period is the period, usually a year, at which the index number is set to 100 (but it could be any number: 1,000 or 1 or anything else). 100 is usually selected since it facilitates the calculation of percentage changes from the base to the current period.
The year 2003 was chosen as the base year since it was the year when the Bhutan Living Standard Survey was conducted. The Household Income Expenditure Survey or Living Standard Survey are the usual source of weights and the basis for drawing up the market basket.

## WEIGHTS.

The weights consider the relative importance of each index item in the total index. CPI
Weighting patterns, as well as the market basket, are typically constructed from data on household expenditure or living standard surveys. The present CPI weights are derived from the Bhutan Living Standard Survey (BLSS) 2003 of the National Statistical Bureau (NSB). The survey gathered, among others, income and expenditure data, which included the levels of consumption by item of expenditure up to the level necessary for the generation of CPI weights.

## MARKET BASKET.

A market basket refers to a sample of goods and services that is used to represent all goods and services bought. In constructing the market basket, items are first combined into groups of similar commodities. The commodity groups selected for the CPI are:

## Food and Non-Alcoholic Beverages.

Alcoholic Beverages, Tobacco and Narcotics.
Clothing and Footwear.
Housing, Water, Electricity, Gas and Other fuels.
Furnishing, Household equipment and Routine Household maintenance.
Health.
Transport.
Communication.
Recreation and Culture.
Education.
Restaurant and hotels.
Miscellaneous goods and services.

## SAMPLE OUTLETS.

These are establishments or retail outlets where prices of commodities/services are collected or quoted. These include shops, footwear stores, tailoring shops, hotel bars, hairdressers, etc. Outlets are selected according to set of criteria that takes into account location, popularity of the establishment along the line of goods to be priced, consistency and completeness of stock and permanency of the outlet.

## PRICING PERIODS AND PROCEDURES.

The accuracy of any statistics depends upon the reliability of the basic information collected. This is especially true for the CPI. While it is necessary to have reliable weighting systems and compilation methods, collecting the basic price information in an accurate and methodical fashion is equally important. Prices of all agricultural items, as these are more volatile, are collected monthly during the first Saturday of the month. Prices of all other items are gathered during the first week of the $2^{\text {nd }}$ month of every quarter.
School fees and related charges are taken once a year, every beginning of the school year and accounts for the annual fees. The entry is carried out all through the succeeding quarters until the next school year.

CPI price collection is conducted by personal visit by our Statistical Officers in the Dzongkhags

## SURVEY FORMS.

The survey forms of retail prices of commodities and services are as follows:

1. Form CPI $1=$ Agricultural products.
2. Form CPI $2=$ Fresh fish and meat.
3. Form CPI 3 = Processed food and non - alcoholic beverages.
4. Form CPI $4=$ Alcoholic beverages, cigarettes and non- food.
5. Form CPI $5=$ Fuel, electricity, transportation, communication \& school fees
6. Form CPI $6=$ Monthly rentals.

## NDEX CONSTRUCTION

The average prices of a commodity from results of the price surveys are gathered. This is just the arithmetic mean (sum of all the prices taken divided by the number of quotations).

The price relative is computed for each of the specifications. The price relative is the simplest form of an index number. Price relative is current average price divided by base year average price multiplied by 100 .

Index are computed at 4-digit group level as the simple average of the price relative belonging to that group.

The index for the 3-digit group is computed as the weighted average of the 4digit group indexes belonging to that group. Like wise for 2-digit and 1-digit group, the similar formula is used

The overall index is computed by getting the weighted average of the indexes of the 12 major group items.

The national index is the weighted average of all indexes of the 23 towns.

| Sl No. | CONTENT | PAGE |
| :---: | :---: | :---: |
|  | Forward |  |
|  | Year on Year Inflation Rate | 2 |
|  | Period to Period Inflation Rate | 2 |
|  | Purchasing Power of Ngultrum | 2 |
|  | Inflation Rate by Major components (Year on Year) | 3 |
|  | Inflation Rate by Major components (Period to Period) | 4 |
|  | Inflation Rate by sub Major components (Year on Year) | 5 |
|  | Inflation Rate by sub Major components (Year on Year) | 6 |
|  | Table 1:Inflation rate by food and non food components | 7 |
| 10 | Table 2:Index by Major components | 8 |
| 11 | Table 3:Inflation by Major components (Year on Year) | 9 |
| 12 | Table 4:Inflation by Major components (Period to Period) | 10 |
| 13 | Table 5:Index by sub Major components | 11 |
| 14 | Table 6:Inflation by sub Major components (Period to Period) | 12 |
| 15 | Table 7:Inflation by sub Major components (Year on Year) | 13 |
| 16 | Graph 1: Change in Index points | 14 |
| 17 | Graph 2:Year on Year Growth Rate | 15 |
| 18 | Graph 3:Period to Period Growth Rate | 16 |
| 19 | Technical Notes, An Overview | 16 |
| 20 | Technical Notes, Background | 17 |
| 21 | Technical Notes, Rebasing the CPI | 18 |
| 22 | Technical Notes, Base Period | 18 |
| 23 | Technical Notes, Weights | 18 |
| 24 | Technical Notes, Weights | 19 |
| 25 | Technical Notes, Sample Outlets | 19 |
| 26 | Technical Notes, Pricing period and Procedures | 19 |
| 27 | Technical Notes, Survey forms | 20 |
| 28 | Technical Notes, Index construction | 20 |

## FOREWORD:

The Consumer Price Index (CPI) measures the changes over time in the average retail price of a fixed basket of consumer commodities and services generally purchased by households for personal consumption. The year - on - year rate of change of the CPI is widely used as an indicator to measure the changes in prices.

The current bulletin is based on the re-based price i.e. 3 ${ }^{\text {rd }} \mathrm{Qtr} .2003$.
However, during the $3^{\text {rd }}$ Qtr. 2003 and $1^{\text {st }} \mathrm{Qtr}$. 2004, year- on-year rate of change of the CPI could not be calculated. Comparisons cannot be made because there is no quarterly index produced for $3^{\text {rd }}$ quarter of the previous year.

The half yearly bulletins published in the previous years are considered as: $1^{\text {st }}$ half as $2^{\text {nd }}$ quarter and $2^{\text {nd }}$ half as $4^{\text {th }}$ quarter.

## CONSUMER PRICE INDEX

(2003=100)
3rd Otr 2006

## YEAR - ON - YEAR GROWTH RATE:

All Bhutan year on year Inflation rate went up by 5.4 percent during this quarter. The increase were contributed by raise in the prices of food items by 5.83 percent, and non-food items by 5.20 percent.

## PERIOD TO PERIOD (QUARTER-TO-QUARTER) INFLATION RATE:

Quarter-to-quarter national Inflation rate was 0.22 percent during this quarter.The slow growth during this period as compared to previous quarter is mainly because there is not much changes in price movements in three months period.The food prices has gone up little by 0.35 percent and non-food items doesn't show much changes when compared to previous quarter.

## PURCHASING POWER OF NGULTRUM (PPN):

The PPN for the nation as measured by CPI is recorded at 86 Chheltrum as of September 2006. This indicates that 100 Ngultrum of 3rd quarter 2006 is worth only 86 Ngultrum of $3{ }^{\text {rd }}$ Quarter 2003.

## YEAR ON YEAR INFLATION RATE FOR THIMPHU FOOD PRICE INDEX:

Year on year inflation rete of Thimphu food price index has been accelerated by 4.88 percent.This increase is due to hike in prices of cereals and it's related products,fresh vegetable,eggs and other vegetables based products.

## YEAR ON YEAR INFLATION RATE BY MAJOR COMPONENTS:

Miscellaneous goods and services increased by 12.66 percent due to increase in prices of personal services by 27.84 percent and personal care items by 8.70 percent.

Recreation and culture increased by 7.04 percent. This is due to increase in the prices of recreation and cultural services and also there is slight increase in the prices of books and stationaries all over the districts.

Transport registered an increase in price by 4.79 percent.These increases can be from the fuels and it's related products.

Alcoholic beverages, tobacco and narcotics prices increased by 8.94 percent due to increase in prices of tobacco by 15.00 percent, narcotics by 10.00 percent and beer has gone up by 7.2 percent.

Clothing and footwear increased by 6.2 percent due to increase in prices of clothing materials by 7.43 percent, garments shoot up by 8.6 pecent and footwear by 2.00 percent only.

Inflation rate of restaurants and hotels increased by 5.26 percent.These increases contributed by food taken away from home by 4.5 percent and accommodation charges by nearly 7.00 percent.

Food and non - alcoholic beverages increased by 5.6 percent because of the increase in prices of food by 5.8 percent and non - alcoholic beverages by 2.8 percent.

## Furnishing, household equipment and routine household maintenance

 increased by 4.2 percent due to increase in prices of furniture and furnishing by 13.4 percent, household textile also by same percent of 13.3 percent.Inflation rate for housing, water, electricity, gas and other fuels increased by 5.03 percent.This is due to increase in the price of actual and imputed rental for housing by 5.5 percent, electricity,gas and other fuel by 4.3 percent during this quarter.

Health sector increased by 3.6 percent. This is due to the increase in prices of pharmaceutical products by 3.3 percent, and other medical product increased by 3.1 percent.

## PERIOD-TO-PERIOD INFLATION RATE BY MAJOR COMPONENTS:

Recreation and Culture slightly increase by 0.28 percent over the three months period.

Miscellaneous goods and services almost remain constant. The prices of these products didn't change because these products are not seasonal in nature.

Food and non - alcoholic beverages also didn't show much changes in prices in three months time.However, egg and pork prices has gone up little by 2.00 and 4.00 precent respectively.

Communication: this time has decreased by 0.7 percent.This is because use of internet became cheaper as compared to previous quarter.

Alcoholic beverages, tobacco and narcotics increased by 1.07 percent. The slight increase was contributed by tobacco and narcotics.

Clothing and footwear also didn't show much changes as these products were not affected by season.

Housing, water, electricity, gas and other fuels showed a little increase of 0.41 percent only during this quarter comparing to the previous quarter.

Health :increased by 0.54 percent during this quarter.This was due to increase in prices of pharmaceutical products by 0.11 percent and other medical products by 0.9 percent.

Transport showed a slight increase of 0.16 percent over the three months period.
.Overall the prices don't change much from quarter to quarter.The price change generally occurs with the seasonal items like vegetables and fruits.Unless there is certain change in price policy from the source, the prices of non-seasonal items more or less don't change in three months period. Therefore, period to period price growth rate is 0.22 percent only.

## YEAR ON YEAR INFLATION RATE BY SUB-MAJOR COMPONENTS:

Vegetables: prices increased by 8.2 percent because of the increase in prices of fresh or chilled vegetables by 6.9 percent and fresh potatoes by 16.9 percent.

Personal care: increased by 12.6 percent due to increase in prices of personal care services by almost 27.00 percent, personal care items by 6.80 percent and personal care effects by 5.04 percent.

Under the sub-major component, the increase in the prices of other components was mainly due to increase in prices of narcotics by 10.03 percent, fuels and lubricants by 6.9 percent,coffee, tea and cocoa by 5.4 percent, non-alcoholic beverages by 2.83 percent, and bread and cereals by 4.00 percent respectively.

Sugar, jams, honey, chocolates and confectionary increased by 11.2 percent. The increase in prices of jams, marmalades and honey by 13.87 percent and sugar by 11.00 percent attributed to the increase in the overall prices.

Food products increased by 8.2 percent due to increase in prices of dried chillies by 9.7 percent, salt by 9.8 percent and other spices by 11.2 percent.

Fruits: prices went up by 7.5 percent because of the rise in prices of fresh fruits like apple and mango.

Clothing increased by 7.4 percent because of the increase in prices of garments by 8.6 percent,childrens and womens clothing by 17.00 and 8.00 percent respectively

Milk, cheese and eggs increased by 8.5 percent. The increase in prices of eggs by 51.00 percent, preserved milk and other milk product by 3.2 percent attributed to the rise in the overall prices of diary products.

The prices of Meat increased by 3.29 percent. This increase was mainly brought by the rise in prices poultry by 3.49 percent and pork by 8.70 percent.

The prices of actual rentals for housing increased by 5.4 percent, this was due to increase in prices of house rent especially in Thimphu and Phuentsholing cities.

Alcoholic beverages increased by 6.1 percent due to increases in prices of beer by 7.00 percent and wine by 2.00 percent.

Electricity, gas and other fuels increased by 4.3 percent because of the increase in prices of gas and other fuels.

## PERIOD-TO-PERIOD INFLATION RATE BY SUB-MAJOR COMPONENTS:

The quarter to quarter growth rate of 0.22 percent during this quarter mainly came from the sub group level items like meat(+0.6), sugar and Jam (+2), food products spices and chillies ( +1.1 ), alcoholic beverages beer $(+1.85)$, tobacco $(+0.6)$, bread and cereals items $(+1.89)$, milk, cheese and eggs ( 0.9 ) mainly because of increase in egg prices, fish $(+7)$ and house rent by 0.6 percent.

The sub group level items with less than half percent were overall food (0.3), oils and fats(+0.3), fresh vegetables (+0.02), narcotics doma(+0.05), and clothing materials mens and womens including children ( +0.09 ), gas and other fuels ( 0.22 ) , fuels and related products $(+0.21)$ and personal care by $(+0.04)$ percent comparing to the pervious quarter 2006.

However, prices under 'Fruit Components' has decrease by (10.82) percent as compared to previous quarter. The main cause for the drop was brought about by the fall in apple prices during this quarter.


## PRRCENTACECHANCE YEARONYEAR

| FOOD | 31.67 | 230 | 1.99 | 1.44 | 0.00 | 1.49 | 0.00 | 1.29 | 285 | 273 | 605 | 6.23 | 568 | 5.02 | 213 | 6.76 | 5.83 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NON-FOOD | 6833 | 371 | 275 | 200 | 0.00 | 5.49 | 0.00 | 7.5 | 5.34 | 4.46 | 506 | 5.13 | 540 | 4.89 | 3.58 | 5.90 | 5.20 |
| TOTAL | 100 | 268 | 228 | 1.84 | 0.00 | 3.36 | 0.00 | 4.84 | 4.56 | 3.91 | 537 | 5.46 | 549 | 4.93 | 3.13 | 6.17 | 5.39 |
| PRRCENAGECHNGEPRTODTOPERCD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FOD | 31.67 | 0.42 | 1.56 | -0.13 | 0.22 | 1.40 | 0.45 | -0.78 | 1.76 | 1.28 | 370 | -0.60 | 1.23 | 0.65 | 0.84 | 3.9 | 0.35 |
| NON-FOD | 6833 | 1.21 | 1.22 | 0.39 | 270 | 231 | 237 | 0.01 | 0.5 | 1.45 | 296 | 0.07 | 084 | 0.96 | 1.67 | 232 | 0.16 |
| TOTAL | 100 | 0.52 | 1.75 | 0.09 | 1.22 | 202 | 1.76 | -0.23 | 0.94 | 1.40 | 319 | -0.14 | 0.96 | 0.86 | 1.41 | 281 | 0.22 |





FOOD ANDNON-ALCOHOUCBEVER 20.44 98.61 100.16 100.45 100.00100 .42101 .95 101.13 10291104.15 107.68 100.99 108.41 108.88


 OOITRREES ECUPIMEN \&ROUTE
HOUSEHODMANITNNCE


 | COMMLNCATION | 4.10 | 0.00 | 0.00 | 0.00 | 100.00 | 100.63 | 100.82 | 100.10 | 98.25 | 100.00 | 9878 | 89.76 | 87.59 | 87.59 | 89.81 | 98.33 | 9268 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |





 NOTE: From 2003 June and backwards, the HEALTH component is inclusive of Transport, Con munication, Recreation \& Culture, Education
Restaurants and hoteds. Thereforethe weights may be aggregated at 2.77 , if Indexes needs to bebadkracked

## TABLE3 CONSUMER PRICEINDEXES-MAJORCOMPONENIS, BHTANJUNE2002TO3rd Gr.2006.

 YEARONYEARGROWTHRATE (\%)

| Z00 | 182 | げレ | 980 | 960 | ＋10 | 618 | Ot＇L | ＋60 | £ $0^{\circ} 0$ | 9＜ 1 | 202 | ご＇ | 600 | S ${ }^{\prime}$＇ | 2¢0 | 00001 | 78101 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 500 | ＋6¢ | 山゙レ | 9t＇9 | $97^{\circ} 0$ | 610 | E1＇G | Lでも | 6＜＇s | ¢で＇ | $2 ¢ 0$ | L $\varepsilon^{\circ}$ | ＋10－ | 92＇1 | ＋10 | L90\％ | zLZ |  |
| $69^{\circ}$ | Sで0 | zLO | t9๕ | $60^{\circ} \mathrm{Z}$ | $29^{\circ}$ | 99＇9－ | $99 \%$ | St＇s | 9L＇t | $10^{\circ}$ | $99^{\circ}$ | 000 | 000 | 000 | 000 | 10 ¢ |  |
| 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | S00 | 90\％ | 000 | 000 | 000 | 000 | 000 | to＇t | NOL＊Јñョ |
| 880 | 28.9 | 880 | 000 | $20 \bigcirc$ | で＇t | टで＇ | $61 \cdot 1$ | 280 | L¢ ¢ | $99 \%$ | tit | 000 | 000 | 000 | 000 | 292 | ヨ |
| $0<0$ | 26๕ | \＆¢ | 000 | でで | ${ }^{1}{ }^{\circ}{ }^{-}$ | टて＇－ | $8{ }^{\circ} \mathrm{L}$ | 98\％${ }^{\text {－}}$ | 1 20 | $6{ }^{\circ} 0$ | ¢0 | 000 | 000 | 000 | 000 | OL＇t | NOLVOINNWWOO |
| 910 | カレて | 560 | 9 ＋＇t |  | ＋8て | $180-$ | $260{ }^{-}$ | 18 ¢ | $90^{\circ} \mathrm{O}$ | 210 | ＋0\％ | 000 | 000 | 000 | 000 | $90 \%$ | IYOdSNVIL |
| $t 5^{\circ}$ | 890 | ¢\＆乙 | 000 | 980 | $29^{\circ}$ | Sc\％ | 28 ＇t | L＇ı | $66^{\circ} \mathrm{I}$ | 68. | 0to | しでト | $210^{-}$ | $10^{\circ} 0$ | 980 | t6z |  |
| $62^{\circ}$ | เ¢̨ | 0ヶて | 900 | 0＜0 | 280 | $6 \mathrm{C}^{\prime}$ | 98̌ | 800 | t¢ $0^{-}$ | «0 |  | $\angle ¢$ | ZLO | عا＇9 | 99＇－ | 89＇ | IONVNEINIUWOTOH ${ }^{\text {SnOOH }}$ <br>  |
| ゆ゙0 | \＆6＇${ }^{\circ}$ | でて | OZ＇0 | $88^{\circ} 0$ | 80.0 | 868 | ＋゙0 | ع10 ${ }^{-}$ | ＋00 | t¢9 | 080 | 000 | 000 | 000 | 000 | 89＇č |  |
| ＋10 | St＇ | Sto | 102 | 260 | $90^{\circ} \mathrm{E}$ | 6 t＇$^{-}$ | $0 ¢ \mathrm{z}$ | $6^{\circ} \mathrm{r}$ | 10＇t－ | s80 | $16{ }^{\circ} \mathrm{t}$ | ${ }^{+9}{ }^{\prime}$ | $0 ¢ 0$ | でト | Lて＇ı | $6 \mathrm{t}^{\circ} \mathrm{O}$ | प甘ヨMLOOSCNV 5NHLOTO |
| 20． | $09^{\circ} \mathrm{E}$ | 090 | で¢ | ＋00 | 980 | $66^{\circ} \mathrm{L}$ |  | 08＇ | Otio | $6 \mathrm{~F}^{\circ} \mathrm{O}$ | 21＇1 | ＋201 | 2¢9 | St＇ | \＆L＇－ | \＆乙 |  |
| $60^{\circ}$ | $\varepsilon 6 ๕$ | 980 | \＆to | \＆゙। | $20^{\circ}$ | L¢๕ | OZ＇1 | 9く－1 | 080 | $29^{\circ}$ | でし | Stio | $60^{\circ}$ | L＇t | LSO | がある |  |



 カL＇tr \begin{tabular}{llllllllllllll}
101.00 \& 102.43 \& 102.57 \& 100.00 \& 102.28 \& 101.34 \& 101.15 \& 102.39 \& 103.26 \& 106.29 \& 105.89 \& 106.01 \& 106.16 \& 107.26 <br>
108.17 \& 110.21 <br>
\hline

 

3.27 \& 97.10 \& 98.81 \& 99.94 \& 100.00 \& 100.92 \& 101.05 \& 101.03 \& 102.93 \& 103.92 \& 101.50 \& 100.41 \& 104.70 \& 105.34 \& 107.00 \& 107.54 \& 108.14 <br>
\hline 1.03 \& 0.00 \& 0.00 \& 0.00 \& 100.00 \& 101.05 \& 101.46 \& 102.13 \& 100.38 \& 102.02 \& 105.25 \& 101.37 \& 10221 \& 104.69 \& 105.94 \& 106.33 \& 107.07 <br>
\hline
\end{tabular}

 \begin{tabular}{llllllllllllllll}
5.16 \& 99.11 \& 99.13 \& 99.17 \& 100.00 \& 101.25 \& 100.42 \& 100.58 \& 101.00 \& 103.33 \& 105.51 \& 107.05 \& 107.16 \& 107.36 \& 108.07 \& 115.28 <br>
\hline

 

35 \& 115.68 \& 97.91 \& 98.67 \& 100.00 \& 100.78 \& 111.59 \& 100.61 \& 102.85 \& 108.35 \& 137.46 \& 121.75 \& 109.13 \& 109.32 \& 128.05 \& 131.63 <br>
\hline
\end{tabular} 117.39



















\％


包






\％ 5
至

曾


老



## TECHNICAL NOTES

## AN OVERVIEW.

The Consumer Price Index (CPI) is a single number used to measure changes in the average retail prices of a market basket or collection of goods and services commonly purchased by an average household in Bhutan. It shows how much, on the average, prices of goods and services have increased or decreased from a particular reference period known as base year. It has been produced in June and December each year since 1979. With the re-basing of base year from 1979 to 2003, henceforth the bulletin will be published on quarterly basis

The CPI plays an important role in national policy making, both in the economic and in the social sphere. It is used for a wide variety of purposes. The CPI is the best and most widely used measure of the rate of inflation. It is the indicator of the performance of the economy and a basis for redirecting monetary and fiscal policies in a country. A popular function is the use of CPI for indexation of wages and social security allowances (the adjustment of workers' income in the form of wages and salaries, or as social security benefits (e.g. pensions). Besides these, CPI is used as a deflator to express value series in real terms, that is, measuring the change in actual volume of transaction by removing the effects of price changes.

## BACKGROUND

The National Statistical Bureau (NSB) CPI dates back to 1979. Two price index were produced and these are:

1. The main CPI for Bhutan.

This series was based on price collection undertaken in 17 towns throughout Bhutan in June and December each year since June 1979. The Price Indexes were calculated by first obtaining the average prices for each individual item across all towns. These averages were determined as weighted averages based on the estimated population of each town. These national average prices were then weighted together to form price indexes at the group level. Item weights were based on the importance of each item in the spending patterns of the population. Finally, indexes at the group level were weighted together to form total indexes using the weights that were likewise based on the importance of each group in the expenditure of the population. The weights used were based on information given in a Survey of Consumer Expenditure undertaken in 1979.
2. The quarterly Food price index of Thimphu.

This was initiated in July 1987 originally as a monthly series. But has been compiled as a quarterly series from the June quarter 1988. The index referred to the average price during the quarter and was based on the collection of prices for a number of food items from a selection of shops in Thimphu. Prices of fruits and vegetables were collected once a month from the fruit and vegetable market.

## REBASING THE CPI.

The CPI derives its usefulness in its representation of how much a typical market basket behaves over a specific time period. When the basket of the reference year no longer represents what household commonly purchases, the CPI becomes irrelevant and would tend to give wrong market signals.
Bhutan's CPI has 1979 as base year. Undoubtedly, substantial changes had taken place since then - economically, socially and technologically. A number of new products had likewise emerged. These factors contributed to the change in households' tastes and preferences thereby causing the fixed market basket of goods and services to become outmoded. To capture such changes for a more meaningful price comparison, it was necessary to re - base the CPI. This entailed the revision of or updating the base year, the weights, the fixed market basket and the sample outlets.

## BASE PERIOD.

The base period is the period, usually a year, at which the index number is set to 100 (but it could be any number: 1,000 or 1 or anything else). 100 is usually selected since it facilitates the calculation of percentage changes from the base to the current period.
The year 2003 was chosen as the base year since it was the year when the Bhutan Living Standard Survey was conducted. The Household Income Expenditure Survey or Living Standard Survey are the usual source of weights and the basis for drawing up the market basket.

## WEIGHTS.

The weights consider the relative importance of each index item in the total index. CPI
Weighting patterns, as well as the market basket, are typically constructed from data on household expenditure or living standard surveys. The present CPI weights are derived from the Bhutan Living Standard Survey (BLSS) 2003 of the National Statistical Bureau (NSB). The survey gathered, among others, income and expenditure data, which included the levels of consumption by item of expenditure up to the level necessary for the generation of CPI weights.

## MARKET BASKET.

A market basket refers to a sample of goods and services that is used to represent all goods and services bought. In constructing the market basket, items are first combined into groups of similar commodities. The commodity groups selected for the CPI are:

$$
\begin{array}{ll}
\text { 1. } & \text { Food and Non-Alcoholic Beverages. } \\
2 . & \text { Alcoholic Beverages, Tobacco and Narcotics. } \\
3 . & \text { Clothing and Footwear. } \\
4 . & \text { Housing, Water, Electricity, Gas and Other fuels. } \\
5 . & \text { Furnishing, Household equipment and Routine Household } \\
\text { maintenance. } \\
6 . & \text { Health. } \\
7 . & \text { Transport. } \\
8 . & \text { Communication. } \\
9 . & \text { Recreation and Culture. } \\
10 . & \text { Education. } \\
11 . & \text { Restaurant and hotels. } \\
12 . & \text { Miscellaneous goods and services. }
\end{array}
$$

## SAMPLE OUTLETS.

These are establishments or retail outlets where prices of commodities/services are collected or quoted. These include shops, footwear stores, tailoring shops, hotel bars, hairdressers, etc. Outlets are selected according to set of criteria that takes into account location, popularity of the establishment along the line of goods to be priced, consistency and completeness of stock and permanency of the outlet.

## PRICING PERIODS AND PROCEDURES.

The accuracy of any statistics depends upon the reliability of the basic information collected. This is especially true for the CPI. While it is necessary to have reliable weighting systems and compilation methods, collecting the basic price information in an accurate and methodical fashion is equally important. Prices of all agricultural items, as these are more volatile, are collected monthly during the first Saturday of the month. Prices of all other items are gathered during the first week of the $2^{\text {nd }}$ month of every quarter.
School fees and related charges are taken once a year, every beginning of the school year and accounts for the annual fees. The entry is carried out all through the succeeding quarters until the next school year.

CPI price collection is conducted by personal visit by our Statistical Officers in the Dzongkhags

## SURVEY FORMS.

The survey forms of retail prices of commodities and services are as follows:

1. Form CPI $1=$ Agricultural products.
2. Form CPI $2=$ Fresh fish and meat.
3. Form CPI $3=$ Processed food and non - alcoholic beverages.
4. Form CPI $4=$ Alcoholic beverages, cigarettes and non- food.
5. Form CPI $5=$ Fuel, electricity, transportation, communication $\&$ school fees.
6. Form CPI $6=$ Monthly rentals.

## INDEX CONSTRUCTION.

The average prices of a commodity from results of the price surveys are gathered. This is just the arithmetic mean (sum of all the prices taken divided by the number of quotations).

The price relative is computed for each of the specifications. The price relative is the simplest form of an index number. Price relative is current average price divided by base year average price multiplied by 100 .

Index are computed at 4-digit group level as the simple average of the price relative belonging to that group.

The index for the 3-digit group is computed as the weighted average of the 4digit group indexes belonging to that group. Like wise for 2-digit and 1-digit group, the similar formula is used.

The overall index is computed by getting the weighted average of the indexes of the 12 major group items.

The national index is the weighted average of all indexes of the 23 towns.

| Sl No. | CONTENT | PAGE |
| ---: | :--- | ---: |
| 1 | Forward | 1 |
| 2 | Year on Year Inflation Rate | 2 |
| 3 | Period to Period Inflation Rate | 2 |
| 4 | Purchasing Power of Ngultrum | 2 |
| 5 | Inflation Rate by Major components (Year on Year) | 3 |
| 6 | Inflation Rate by Major components (Period to Period) | 4 |
| 7 | Inflation Rate by sub Major components (Year on Year) | 5 |
| 8 | Inflation Rate by sub Major components (Year on Year) | 6 |
| 9 | Table 1:Inflation rate by food and non food components | 7 |
| 10 | Table 2:Index by Major components | 8 |
| 11 | Table 3:Inflation by Major components (Year on Year) | 9 |
| 12 | Table 4:Inflation by Major components (Period to Period) | 10 |
| 13 | Table 5:Index by sub Major components | 11 |
| 14 | Table 6:Inflation by sub Major components (Period to Period) | 12 |
| 15 | Table 7:Inflation by sub Major components (Year on Year) | 13 |
| 16 | Graph 1: Change in Index points | 14 |
| 17 | Graph 2:Year on Year Growth Rate | 15 |
| 18 | Graph 3:Period to Period Growth Rate | 16 |
| 19 | Technical Notes, An Overview | 16 |
| 20 | Technical Notes, Background | 17 |
| 21 | Technical Notes, Rebasing the CPI | 18 |
| 22 | Technical Notes, Base Period | 18 |
| 23 | Technical Notes, Weights | 18 |
| 24 | Technical Notes, Weights | 19 |
| 25 | Technical Notes, Sample Outlets | 19 |
| 26 | Technical Notes, Pricing period and Procedures | 19 |
| 27 | Technical Notes, Survey forms | 20 |
| 28 | Technical Notes, Index construction | 20 |

## FOREWORD:

The Consumer Price Index (CPI) measures the changes over time in the average retail price of a fixed basket of consumer commodities and services generally purchased by households for personal consumption. The year - on - year rate of change of the CPI is widely used as an indicator to measure the changes in prices.

The current bulletin is based on the re-based price i.e. $3^{\text {rd }} \mathrm{Qtr}$. 2003. However, during the $3^{\text {rd }}$ Qtr. 2003 and $1^{\text {st }}$ Qtr. 2004, year- on-year rate of change of the CPI could not be calculated. Comparisons cannot be made because there is no quarterly index produced for $3{ }^{\text {rd }}$ quarter of the previous year.

The half yearly bulletins published in the previous years are considered as: $1^{\text {st }}$ half as $2^{\text {nd }}$ quarter and $2^{\text {nd }}$ half as $4^{\text {th }}$ quarter.

## CONSUMER PRICE INDEX <br> (2003=100) <br> 4th Qtr 2006

## YEAR - ON - YEAR GROWTH RATE:

All Bhutan year on year Inflation rate went up by 5.30 percent during this quarter. The increase were contributed by rise in the prices of non- food items by 5.33 percent, and food items by 5.23 percent.

## PERIOD TO PERIOD (QUARTER-TO-QUARTER) INFLATION RATE:

Quarter-to-quarter national inflation rate rose to 0.77 percent during this quarter.The growth is mainly because of the rise in prices of non-food items by 1.09 percent and food items by 0.08 percent.

## PURCHASING POWER OF NGULTRUM (PPN):

The PPN for the nation as measured by CPI is recorded at 85 Chheltrum as of 4th Qtr 2006. This indicates that 100 Ngultrum of 4th quarter 2006 is worth only 85 Ngultrum of $3{ }^{\text {rd }}$ Quarter 2003.

## YEAR ON YEAR INFLATION RATE FOR THIMPHU FOOD PRICE INDEX:

Year on year inflation rete of Thimphu food price index has been accelerated by 5.86 percent.This increase is due to hike in prices of bread \&cereals, eggs, meat,fruit and mainly by preserved milk like "Everyday milk powder" etc...

## PERIOD TO PERIOD INFLATION RATE FOR THIMPHU FOOD PRICE INDEX:

Period to period inflation rate of Thimphu increased by 1.19 percent during this quarter.This is due to rise in prices of milk, cheese, eggs, poultry and fruits attributing to the overall rise in the price of food.

## YEAR ON YEAR INFLATION RATE BY MAJOR COMPONENTS:

Food and non alcoholic beverages prices increased by 5.15 percent due to increase in prices of Bread and cereals by 4.01 percent, Meat by 3.04 percent, Fish by 2.87 percent, Milk,cheese and eggs by 10.86 percent, Oils and fats by 1.83 percent, Fruits by 7.79 percent, vegetables by 4.13 percent, Sugar, jams, honey, chocolate and confectionary by 11.16 percent, Food products by 6.28 percent, Coffee, tea and cocoa by 4.75 percent and Mineral waters, Soft drinks, Fruit and vegetables juices by 1.67 contributed to Food and non-alcoholic beverages.

Alcoholic Beverages,Tobacco and Narcotics jumped by 6.18 percent.The increase is due to rise in prices of Beer by 8.22 percent, Narcotics by 8.03 percent, Spirits by 3.60 percent and Wine by 3.46 percent.

Clothing and Footwear increased by 5.29 percent.The increase in Clothing and Footwear is mainly due to jump in prices of ready made Garments by 6.46 percent and Footwear by 4.35 percent.

Housing, Water,Electricity, Gas and Other fuels increased by 5.44 percent.The increase is due to rise in prices of Actual and imputed rentals for housing by 5.97 percent,Electricity, gas and other fuels by 4.18 percent and maintenance and repair of dwelling by 3.80 percent.

Furnishing, Household equipment and Routine Household maintenance increased by 7.39 percent due to rise in prices of Furniture and furnishing by 19.45 percent, Household Textiles by 14.38 percent, Glassware, Tableware and Utensils by 10.33 percent and Tools and equipments for house and garden by 4.47 percent.

Health increased by 6.62 percent due to rise in price of Other medical products by 6.95 percent and Pharmaceutical products by 6.23 percent.

Transport increased by 3.26 percent due to rise in price of Fuels and lubricants by 6.37 percent.

Communication increased by 10.15 percent because of the increase in cost of Postal services by 6.47 percent and Telephone and telefax services by 10.39 percent

Recreation and Culture increased by 9.66 percent due to rise in prices of Recreation and Cultural by 11.61 percent and newspapers,books and stationaries by 4.07 percent.

Restaurant and hotels increased by 2.32 percent due to rise in price of catering services by 1.66 percent and accommodation services by 3.66 percent. Miscellaneous goods and services increased by 5.56 percent due to increase in personal care items by 6.30 percent and personal care effects by 5.50 percent.

## PERIOD-TO-PERIOD INFLATION RATE BY MAJOR COMPONENTS:

FOOD AND NON-ALCOHOLIC BEVERAGES: increased by 0.03 percent during this quarter.The prices of food drop to $(0.01)$ percent and non alcoholic beverages marked an increase of 0.70 percent.

ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS increased by 0.80 percent during this quarter. This is due to jump in demand of the alcoholic beverages by 0.91 percent, tobacco by 0.32 percent and narcotics by 0.94 percent.

CLOTHING AND FOOTWEAR increased by 1.18 percent during fourth quarter. The prices of clothing increased by 0.70 percent and footwear marked a hike of 2.62 percent.

HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS increased by 0.58 percent this quarter. The prices of actual rental for housing increased by 0.66 percent and electricity, gas and other fuels increased by 0.27 percent.

FURNISHING, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE increased by 3.13 percent during fourth quarter.The prices of the furniture and furnishing increased by 5.30 percent, household appliances by 13.16 percent and glassware, tableware and household utensils by 8.23 percent.

HEALTH increased by 2.96 percent during this quarter.The increase is due to rise in prices of pharmaceutical products by 2.76 percent and other medical products by 3.14 percent.

TRANSPORT declined by (0.02) percent during this three months period.This is due to drop in prices of pertol by 2.00 Nu and diesel by 1.00 Nu .

COMMUNICATION increased by 4.11 percent during this quarter.The increase is due to rise in cost of telephone call from the telephone booth and internet services from the internet cafe by 3.98 percent

RECREATION AND CULTURE increased by 2.45 percent during this period.The increase is due to rise in prices of recreation and cultural services by 2.98 percent and newspapers, books and stationaries by 2.04 percent.

RESTAURANT AND HOTELS increased by 0.74 percent during this quarter.This is due to rise in the price of catering services by 0.64 percent and accommodation services by 0.87 percent.

MISCELLANEOUS GOODS AND SERVICES decreased by (0.24) percent.This is due to decline in prices of personal care items by (1.34) percent.

## YEAR ON YEAR INFLATION RATE BY SUB-MAJOR COMPONENTS:

BREAD AND CEREALS price increased by 4.01 percent.This is due to rise in prices of other cereal, flour and other cereal products by 17.68 percent and bread by 9.34 percent.

MEAT increased by 3.04 percent.The increase is due to increase in price of beef by 3.68 percent, pork by 1.72 percent and poultry by 3.61 percent.

FISH increased by 2.87 percent due to increase in prices of fresh fish by 3.39 percent and perserved fish by 2.18 percent.

MILK, CHEESE AND EGGS increased by 10.86 percent.The prices of preserved milk increased by 7.40 percent and eggs by 55.10 percent.

OILS AND FATS increased by 1.83 percent.This is due to increase in prices of edible oils and fats by 1.86 percent and butter and margarine by 1.80 percent.

FRUITS increased by 7.79 percent.This is due to increase in price of fresh fruit itself.
VEGETABLES increased by 4.13 percent.This is due to rise in price of potatoes by 8.70 percent and vegetable based produts by 5.78 percent.

SUGAR, JAMS AND ETC... price increased by 11.16 percent.This is due to rise in prices of sugar by 11.02 percent and jams and marmalades by 12.95 percent.

FOOD PRODUCTS price increased by 6.28 percent.This is due to increase in price of dried chillies by 5.99 percent and powdered chillies by 5.02 percent.

NON ALCOHOLIC BEVERAGES pirce increased by 2.97 percent.This is due to increase in price of coffee, tea and cocoa by 4.75 percent and minerals water, soft drink and fruit drink by 1.67 percent.

ALCOHOLIC BEVERAGES price increased by 6.85 percent.The increase is due to rise in prices of wine by 3.46 percent and spirits by 3.60 percent.

TOBACCO price increased by 2.21 percent.The rise is due to increase in prices of tobacco itself.NARCOTICS increased by 8.03 percent

CLOTHING AND FOOTWEAR increased by 5.29 percent.The prices of clothing increased by 5.29 percent and footwear by 4.35 percent.

ACTUAL RENTAL FOR HOUSING increased by 5.97.The increase is due to rise in demand for housing in the Country.

## PERIOD-TO-PERIOD INFLATION RATE BY SUB-MAJOR COMPONENTS:

OTHER CEREAL,FLOUR AND CEREAL BASED PRODUCT price increased by 9.26 percent during this quarter. This is due in increase in price of bread by 3.11 percent and other bakery products by 1.74 percent attributed to the increase.

Inflation rate of POULTRY increased by 1.46 percent during this period.This is due to increase in demand of Indian and local chicken.

PRESERVED MILK AND OTHER MILK PRODUCTS increased by 4.16 percent.This is mainly due to hike in the price of everyday milk powder.

EGGS AND EGG BASED PRODUCTS increased by 3.32 percent.This is due to Indian eggs started to supply to Bhutan which is cheaper then local eggs.

FRUITS increased by 0.38 percent.
VEGETABLES declined by (3.80) percent during this period.This is because the vegetables purchased from India is always lower then our local vegetables.

SPIRITS price increased by 2.06 percent due to rise in demand of drinking. Men's readymade garments price increased by 1.34 percent during this period.

Inflation of NON-FOOD increased by 1.09 percent during this period due to increase in price of footwear by 2.62 percent and maintenance and repair of dwelling by 2.06 percent.

HOUSING, WATER,ELECTRICITY, GAS AND OTHER FUEL increased by 0.58 percent during fourth quarter due to rise in prices of actaul and imputed rental for hounsing by 0.66 percent.

FURNISHING HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE increased by 3.13 percent due to increase in prices of furniture and furnishing by 5.30 percent and household appliances by 13.16 percent.

HEALTH increased by 2.96 percent during this quarter. This is due to rise in prices of pharmaceutical products and other medical products

TRANSPORT slightly declined by (0.02) percent during this quarter due to drop in prices of petrol by 2.00 Nu . and diesel by 1.00 Nu .brought the transport sector to decline.

| F00 | 31.6 | 230 | 1.99 | 1.44 | 0.00 | 1.49 | 0.00 | 1.29 | 285 | 273 | 6.05 | 623 | 568 | 502 | 213 | 676 | 583 | 5.23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NON-FOD | 633 | 3.71 | 275 | 200 | 0.00 | 549 | 0.00 | 7.7 | 534 | 4.46 | 506 | 513 | 540 | 4.89 | 358 | 590 | 520 | 5.33 |
| TOTAL | 100 | 268 | 228 | 1.84 | 0.00 | 336 | 0.00 | 4.84 | 4.56 | 3.91 | 5.37 | 5.46 | 5.49 | 4.93 | 3.13 | 6.17 | 539 | 5.30 |
| PRCENTACECHANGEPGODTOPRTCD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| F00 | 31.6 | 0.42 | 1.56 | -0.13 | 0.2 | 1.40 | 0.45 | -0.78 | 1.76 | 128 | 3.70 | -0.60 | 1.3 | 0.66 | 0.84 | 3.91 | 0.35 | 0.08 |
| NON-FOD | 633 | 1.21 | 1.22 | 0.39 | 270 | 231 | 237 | 0.01 | 0.5 | 1.45 | 296 | 0.07 | 0.84 | 0.96 | 1.67 | 232 | 0.16 | 1.09 |
| TOTAL | 100 | 0.52 | 1.75 | 0.09 | 1.22 | $2 ®$ | 1.76 | -0.23 | 0.94 | 1.40 | 3.19 | -0.14 | 0.96 | 0.86 | 1.41 | 281 | 0.22 | 0.77 |

## 





 Solitrias



 FECFATIONADOUTUE $\quad 2620.000$





3rdar． $2000=100$

| $\varnothing$ | ¢ 9 | 19 | \＆1દ | $6{ }^{6}$ | 679 | 9t9 | 189 | 168 | ¢゙ャ | 000 | 00 | $¢_{¢} \varepsilon$ | 00 | ${ }^{2} 1$ | 82 | 892 | 000 | 7101 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ss | 99 Z | 1621 | 188 | \＆tで | 9001 | เ¢ | $69^{2}$ | 992 | \＆10－ | 00 | 00 | t92 | 00 | や゙1 | 29－ | 927 | 22z |  |
| $\overline{82}$ | OS | t89 | 68 | ${ }_{\text {co }} 0$ | ST | 892 | छ＜ | 1991 | 099 | 000 | 00 | 000 | 000 | 000 | 000 | 000 | ம¢ | Stiohansinuerilisy |
| 00 | 000 | 00 | 000 | 000 | 000 | 000 | 900 | 000 | 000 | 000 | 000 | 000 | 00 | 000 | 00 | 000 | tor | Noutence |
| 996 | 102 | 0121 | 89 | $80^{\circ}$ | 90 | L£－ | $\underbrace{\circ}$ | tLO | 168 | 00 | 000 | 00 | 00 | 000 | 000 | 000 | 22 | anlmoan noulsuay |
| Stor | 189 | 88 | 206－ | ゆで－ | $980-$ | £00－ | ஹ2゙ | æ0－ | \＆ 2 － | 00 | 00 | 00 | 000 | 000 | 000 | 000 | 0it | NOL४TNWW以 |
| $\overline{\text { EE }}$ | $6 L^{\prime}$ | \＆18 | 188 | 169 | tot | L8t | Os＇t | 9tz | t＜ot | 000 | 00 | 00 | 00 | 000 | 00 | 000 | 902 | Hoaswell |
| W9 | $\propto ¢$ | $\mathscr{¢}$ ¢ | 202 | 20 | ${ }^{66 \%}$ | 929 | ＋¢゙ | 969 | Et＇ | OS＇t | 00 | ぜH | 000 | 810 | 980 | 617 | t62 | HLTVE |
| ¢ 2 | ¢ | «＇s | £2 | 8 H | O¢¢ | t＜ | 808 | 99 | $9 ¢ 8$ | 989 | 000 | ${ }^{8 / 9}$ | 000 | 069 | $18 t$ | 209 | 209 |  |
| tos | ws | ®8＇ | 88 | 276 | 96 | ع6 | $¢_{6} 6$ | 069 | 624 | 000 | 000 | 000 | 00 | 000 | 00 | 000 | 958 |  |
| $\overline{69}$ | 919 | 6 69 | 899 | 2st | ${ }^{28}$ | 199 | tr | 192 | ES | 819 | 00 | 969 | 00 | 2st | 9\％2 | 498 | 6501 | bugMLosanvenhlon |
| 819 | t68 | æ\％ | य8 | ๕H | 080 | \＆ı乙ı | 6021 | 88 | 302 | 8601 | 000 | 064 | $\infty 0$ | $96 \%$ | ¢ 0 － | 281 | £z |  |
| grs | 899 | 499 | 002 | tsit | t¢9 | 619 | 09 | 69 | 162 | 290 | 000 | St | 000 | $18 \%$ | 912 | ャ®て | totz |  |



| пв | wectr | ${ }_{\text {INE }}^{2002}$ |  | 2003 |  |  |  | 204 |  |  |  | 2005 |  |  | 2006 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | une | rdar. |  |  | andar | de | 4thar. | rist | ar. 2 | noar | ar |  |  | ar. | dar 3 | dar |  |
| 3dar. $2003=100$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FOCDADNOV-ALCOHOIC | 22.4 | 0.5 | 1.57 | 029 | 0.45 | 1.42 | 0.52 | 0.80 | 1.76 | 1.20 |  | 3.37 | 0.0 | 1.33 | 0.43 |  | 0.86 | 3.98 | 0.29 |  |
|  \& NARCOICS | ${ }^{23}$ | -1.73 | 1.45 | 6.32 | 10.74 | 1.12 | 0.49 | 0.40 | 1.80 | 237 |  | 7.90 | -0.35 | 0.04 | 3.42 |  | 0.80 | 3.60 | 1.07 |  |
| QLOTHNG ADFDOTMEAR | 10.49 | 1.21 | 1.22 | 0.30 | 1.64 | 4.91 | 0.35 | -1.01 | 1.09 | 230 | 30 | -1.49 | 306 | 0.92 | 201 |  | 0.45 | 3.45 | 0.14 |  |
| housng watrerectratr,GAS sompreas | 2.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 | 6.54 | 0.04 | 0.13 | 044 |  | 898 | -008 | 028 | 0.20 |  | 242 | 1.93 | 0.41 |  |
| ECUPIMEN \& ROUTNE HOUSHODMANIENANCE | 5.68 | $-1.66$ | 6.13 | 0.72 | 25 | 3.3 | 0.7 | 0.54 | -0.08 | 235 |  | 1.28 | 87 | 0.70 | 0.06 |  | 240 | 251 | 0.79 |  |
| [ITH | 294 | 0.36 | -001 | 0.17 | 11.21 | 0.40 | 1.89 | -1.98 | 1.17 | 4.87 |  | 0.35 | -0.67 | 0.35 | 0.0 |  | 236 | 0.63 | 0.54 | 2 |
| Wsport | 7.06 | 0.00 | 000 | 0.00 | 0.00 | 7.04 | 0.12 | 0.46 | 381 | 0.97 |  | 0.81 | 284 | 335 | 1.46 |  | 0.5 | 214 | 0.16 | 0. |
| mav | 4.10 | 0.00 | 000 | 0.00 | 0.00 | 0.63 | 0.19 | 0.71 | -1.85 | 1.78 |  | $-1.22$ | -913 | $-242$ | 0.0 |  | 253 | 3.2 | 0.70 |  |
| Cratiovadoulure | 22 | 0.00 | 000 | 0.00 | 0.00 | 4.4 | 4.66 | 3.5 | 082 | 1.19 |  | $-1.22$ | -4.12 | 5.02 | 0.0 |  | 0.8 | 5.2 | 0.28 | 24 |
| atan | 4.04 | 0.00 | 000 | 0.00 | 0.00 | 0.00 | -0.05 | 0.05 | 000 | 0.00 |  | 0.00 | 000 | 0.00 | 0.0 |  | 0.00 | 0.0 | 0.00 | 0. |
| RESTARANSADHOTES | 301 | 0.00 | 000 | 0.00 | 0.00 | 0.65 | -0.01 | 1.76 | 545 | 7.65 |  | 6.68 | 1.62 | 209 | 3.64 |  | 0.72 | 0.3 | 0.59 | 0 |
| MSCPIANEOUSCOOOS\&SPRMCE | 272 | -067 | 0.14 | 1.26 | 0.11 | 1.37 | 0.32 | 425 | -579 | 421 |  | 5.13 | 0.19 | 026 | 646 |  | 1.7 | 3.94 | 0.04 | 0 |
| TAL | 10000 | 0.52 | 1.75 | 0.09 | 1.22 | 202 | 1.76 | ${ }_{0} .23$ | 0.94 | 1.40 | 40 | 3.19 | -0.14 | 0.96 | 0.8 |  | 1.41 | 281 | 0.22 | 0 |


| ппм |  |  |  | 2003 |  |  | 204 |  |  |  | 2005 |  |  | 2006 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ne |  | June | 3d | ar. |  | 2nd | 3da | thar | istar |  | ruar | anar | istar | 2 rac | rat | 4inar |
| F000 | 27.99 | 0.56 | 1.12 | 020 | -0.47 | 1.42 | 0.51 | $1 \quad 0.73$ | 1.85 | 1.14 | 3.45 | -0.78 | 1.40 | 0.42 | 0.86 | 4.12 | 0.27 | -0.01 |
| BreAdANCAREAS(N) | 7.98 | -0.09 | 1.41 | 0.14 | -250 | 228 | 0.92 | 2 0.19 | 123 | 0.85 | 298 | -0.38 | 0.11 | 0.14 | 1.04 | 0.85 | 1.89 | 0.19 |
| MEAT | 327 | 267 | 76 | 1.14 | 0.06 | 0.92 | 0.13 | $3-0 . C$ | 1.88 | 0.96 | -233 | -1.07 | 4.2 | 0.61 | 1.58 | 0.50 | 0.56 | ${ }^{0.3}$ |
| Fst | 1.03 | 0.00 | 000 | 000 | 0.0 | 1.05 | 0.41 | 0.68 | -1.71 | 1.63 | 3.17 | 3.80 | 0.83 | 243 | 1.19 | 0.37 | 0.70 | 0.5 |
| MLK CIESEAND | 516 | 0.21 | 0.0 | 003 | 0.84 | 1.25 | 0.82 | 0.16 | 0.42 | 231 | 211 | 1.46 | 0.10 | 0.19 | 0.6 | 6.67 | 0.80 | 23 |
| alsan Fats | 341 | 1.44 | 1.33 | 246 | -0.31 | 245 | 0.73 | 0.07 | 1.40 | 1.00 | -1.20 | -1.5 | 238 | 0.83 | 1.00 | 0.33 | 027 | 0.2 |
| fruts | 1.35 | 30.96 | -1536 | 433 | 6.76 | 0.78 | 10.73 | -9.84 | 223 | 535 | 20.8 | -11.43 | -10.37 | 0.17 | 17.13 | 280 | -10.82 | ${ }^{0.38}$ |
| Vegetabes | 412 | 1.28 | 930 | -1.53 | 8.69 | -0.38 | 3.46 | 3.03 | 7.84 | -1.53 | 5.92 | 0.76 | 7.04 | -0.07 | 4.75 | 13.62 | $0 . C 2$ | -3.80 |
| SUCAR JAMANDETC. | 056 | 0.11 | 424 | -267 | 52 | 1.50 | 0.96 | -123 | 207 | 0.37 | 6.78 | 3.80 | 0.29 | 0.31 | 0.33 | 8.51 | 1.90 | 0.2 |
|  | 087 | 028 | 0.0 | 0.68 | 0.17 | 244 | 0.00 | 9.17 | 6.15 | 474 | 4.73 | 0.31 | 0.97 | 292 | 1.39 | 266 | 1.05 | 1.04 |
| NCN-ALCOHOUCBEVERAGES | 1.74 | 0.79 | -0,4 | 0.5 | 0.08 | 1.39 | 0.78 | 210 | 0.37 | 239 | 1.88 | 1.98 | 0.12 | 0.57 | 0.86 | 0.86 | 0.5 | 0.70 |
| ALCOHOUC BEVEPACES (indudingr | 1.2 | 231 | 1.42 | 000 | 735 | 0.00 | 021 | -1.09 | 4.12 | 020 | 4.34 | -0.16 | 0.01 | 0.17 | 0.79 | 3.14 | 1.88 |  |
| TOBACOO | 033 | -1.20 | 1.48 | -11.99 | 14.19 | 4.17 | -283 | 21.00 | -1.79 | 989 | 3.17 | 0.8 | 0.00 | 1291 | 0.55 | 0.72 | 0.59 | 0.33 |
| HCOTCSED | 069 | 0.00 | 0.00 | 0.00 | 0.00 | 1.66 | 0.16 | 0.21 | 0.51 | 271 | 0.03 | -1.5 | 0.13 | 281 | 0.31 | 6.63 | 0.06 | 0.9 |
| Mna | 7.87 | 1.21 | 1.22 | 030 | 1.64 | 5.02 | 0.36 | -1.16 | 1.53 | 292 | -1.73 | 25 | 0.88 | 245 | 0.34 | 4.41 | 0.09 | 0.7 |
| ACTULI PANALSFRHOUSNG | 187 | 0.00 | 0.00 | 000 | 0.00 | 1.05 | 8.9 | -0.41 | -0.11 | 0.14 | 9.05 | 0.0 | 0.31 | 0.15 | 225 | 234 | 0.00 | 0.6 |
| IECTRATY, GASADOTERELE | 604 | 221 | 634 | 1.67 | 1083 | 0.11 | 0.27 | 1.66 | 0.42 | 1.40 | 8.41 | 0.31 | 0.01 | 0.37 | 287 | 0.78 | 0.2 | 0.2 |
| fresad Llbicants | 320 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.7 | 7-0.67 | 0.33 | 1.22 | 0.99 | 4.04 | 1.27 | 0.34 | 128 | 5.04 | 0.21 | -0.29 |
| Eucation | 404 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 000 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.00 |
| fersonla Care | 272 | 0.00 | 0.00 | 000 | 0.00 | 1.37 | 0.32 | 24.3 | 5.79 | 421 | 5.13 | 0.19 | 0.2 | 6.46 | 1.7 | 3.94 | 0.04 |  |
| TAL |  | 0.52 | 1.75 | 0.09 | 122 | 202 | 1.76 | 6 -0.23 | 0.4 | 1.40 | 3.19 | -0.14 | 0.96 | 0.86 | 1.41 | 281 | 0.2 |  |

GRAPH 1:CHANGE IN INDEX POINTS.


GRAPH 2: YEAR ON YEAR INFLATION RATE.



## TECHNICAL NOTES

## AN OVERVIEW.

The Consumer Price Index (CPI) is a single number used to measure changes in the average retail prices of a market basket or collection of goods and services commonly purchased by an average household in Bhutan. It shows how much, on the average, prices of goods and services have increased or decreased from a particular reference period known as base year. It has been produced in June and December each year since 1979. With the re-basing of base year from 1979 to 2003, henceforth the bulletin will be published on quarterly basis.

The CPI plays an important role in national policy making, both in the economic and in the social sphere. It is used for a wide variety of purposes. The CPI is the best and most widely used measure of the rate of inflation. It is the indicator of the performance of the economy and a basis for redirecting monetary and fiscal policies in a country. A popular function is the use of CPI for indexation of wages and social security allowances (the adjustment of workers' income in the form of wages and salaries, or as social security benefits (e.g. pensions). Besides these, CPI is used as a deflator to express value series in real terms, that is, measuring the change in actual volume of transaction by removing the effects of price changes.

## BACKGROUND

The National Statistical Bureau (NSB) CPI dates back to 1979. Two price index were produced and these are:

1. The main CPI for Bhutan.

This series was based on price collection undertaken in 17 towns throughout Bhutan in June and December each year since June 1979. The Price Indexes were calculated by first obtaining the average prices for each individual item across all towns. These averages were determined as weighted averages based on the estimated population of each town. These national average prices were then weighted together to form price indexes at the group level. Item weights were based on the importance of each item in the spending patterns of the population. Finally, indexes at the group level were weighted together to form total indexes using the weights that were likewise based on the importance of each group in the expenditure of the population. The weights used were based on information given in a Survey of Consumer Expenditure undertaken in 1979.

## 2. The quarterly Food price index of Thimphu.

This was initiated in July 1987 originally as a monthly series. But has been compiled as a quarterly series from the June quarter 1988. The index referred to the average price during the quarter and was based on the collection of prices for a number of food items from a selection of shops in Thimphu. Prices of fruits and vegetables were collected once a month from the fruit and vegetable market.

## REBASING THE CPI.

The CPI derives its usefulness in its representation of how much a typical market basket behaves over a specific time period. When the basket of the reference year no longer represents what household commonly purchases, the CPI becomes irrelevant and would tend to give wrong market signals.
Bhutan's CPI has 1979 as base year. Undoubtedly, substantial changes had taken place since then - economically, socially and technologically. A number of new products had likewise emerged. These factors contributed to the change in households' tastes and preferences thereby causing the fixed market basket of goods and services to become outmoded. To capture such changes for a more meaningful price comparison, it was necessary to re - base the CPI. This entailed the revision of or updating the base year, the weights, the fixed market basket and the sample outlets.

## BASE PERIOD.

The base period is the period, usually a year, at which the index number is set to 100 (but it could be any number: 1,000 or 1 or anything else). 100 is usually selected since it facilitates the calculation of percentage changes from the base to the current period.
The year 2003 was chosen as the base year since it was the year when the Bhutan Living Standard Survey was conducted. The Household Income Expenditure Survey or Living Standard Survey are the usual source of weights and the basis for drawing up the market basket.

## WEIGHTS.

The weights consider the relative importance of each index item in the total index. CPI
Weighting patterns, as well as the market basket, are typically constructed from data on household expenditure or living standard surveys. The present CPI weights are derived from the Bhutan Living Standard Survey (BLSS) 2003 of the National Statistical Bureau (NSB). The survey gathered, among others, income and expenditure data, which included the levels of consumption by item of expenditure up to the level necessary for the generation of CPI weights.

## MARKET BASKET.

A market basket refers to a sample of goods and services that is used to represent all goods and services bought. In constructing the market basket, items are first combined into groups of similar commodities. The commodity groups selected for the CPI are:

> Food and Non-Alcoholic Beverages.
> Alcoholic Beverages, Tobacco and Narcotics.
> Clothing and Footwear.
> Housing, Water, Electricity, Gas and Other fuels.
> Furnishing, Household equipment and Routine Household maintenance.
> Health.
> Transport.
> Communication.
> Recreation and Culture.
> Education.
> Restaurant and hotels.
> Miscellaneous goods and services.

## SAMPLE OUTLETS.

These are establishments or retail outlets where prices of commodities/services are collected or quoted. These include shops, footwear stores, tailoring shops, hotel bars, hairdressers, etc. Outlets are selected according to set of criteria that takes into account location, popularity of the establishment along the line of goods to be priced, consistency and completeness of stock and permanency of the outlet.

## PRICING PERIODS AND PROCEDURES.

The accuracy of any statistics depends upon the reliability of the basic information collected. This is especially true for the CPI. While it is necessary to have reliable weighting systems and compilation methods, collecting the basic price information in an accurate and methodical fashion is equally important. Prices of all agricultural items, as these are more volatile, are collected monthly during the first Saturday of the month. Prices of all other items are gathered during the first week of the $2^{\text {nd }}$ month of every quarter.
School fees and related charges are taken once a year, every beginning of the school year and accounts for the annual fees. The entry is carried out all through the succeeding quarters until the next school year.

CPI price collection is conducted by personal visit by our Statistical Officers in the Dzongkhags

## SURVEY FORMS.

The survey forms of retail prices of commodities and services are as follows:

1. Form CPI $1=$ Agricultural products.
2. Form CPI $2=$ Fresh fish and meat.
3. Form CPI $3=$ Processed food and non - alcoholic beverages.
4. Form CPI $4=$ Alcoholic beverages, cigarettes and non- food.
5. Form CPI $5=$ Fuel, electricity, transportation, communication \& school fees
6. Form CPI $6=$ Monthly rentals.

## INDEX CONSTRUCTION

The average prices of a commodity from results of the price surveys are gathered. This is just the arithmetic mean (sum of all the prices taken divided by the number of quotations).

The price relative is computed for each of the specifications. The price relative is the simplest form of an index number. Price relative is current average price divided by base year average price multiplied by 100 .

Index are computed at 4-digit group level as the simple average of the price relative belonging to that group.

The index for the 3-digit group is computed as the weighted average of the 4digit group indexes belonging to that group. Like wise for 2-digit and 1-digit group, the similar formula is used.

The overall index is computed by getting the weighted average of the indexes of the 12 major group items.

The national index is the weighted average of all indexes of the 23 towns.

