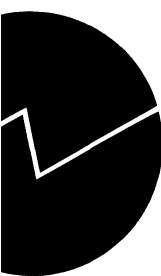Statistics Norway
Economic Statistics

*Arne Bråten and Tom Langer Andersen*

## The Consumer Price Index of Mozambique

An analysis of current methodology –
proposals for a new one
A short-term mission 16 April - 7 May 1998

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# 1. Introduction and summary

Within the framework of the Twinning Project the Instituto Nacional de Estatistica (INE) has given priority to the needs for a review of the methodology used for the Consumer Price Index (CPI). This area has in the past mainly been supported by the UNDP covering different methodological aspects, IT-development as well as building of capacity and competence. An Italian project, which closed down during 1997, focused on improving publishing routines and validation of the national index.

During our stay the main focus has been on analysing the current state of the CPI. An overall impression is that the practice and techniques followed by INE are carried out very well. The staffs in the central unit and the branch unit (the price collectors) - both units located in Maputo – as well as the provincial staffs (Beira and Nampula) are good at handling their respective tasks. In some aspects the choices made on methodology can be recognised from the Bureau of Labor Statistics, USA and the International Labor Organisation in their respective publications covering the issue of constructing a CPI. In some parts of the Index the very rapid rate of change in the Mozambican economy, has made the existing solutions out of date. The overall result is an index which measures inflation in a conservative way, most likely understating the true rate of inflation.

Making amendments in methodology, in combination with a parallel building of national competence and capacity for maintenance on a sustainable basis requires time. Due to this we recommend a step-by-step approach or programme to improve the CPI, covering a period of 3 years. The programme me will be heavily based on national learning by doing. Although much can and will be achieved by training we consider the size of the staff – especially in the central unit – to be below the required level. For a sustainable long-term building of competence and capacity the number of staff is recommended increased by 3 persons, where competence in economics at the university level seems to be the most urgent need in the short run. This issue is discussed somewhat further in chapter 5.1. A basic implication of the learning by doing principle is that the majority of work to be done must be performed by the CPI staff - in assistance with and supervised by the long-term consultant. During short-term visits the supervisionary and advisory tasks are managed by the short-term consultant. The 3 year programme me has the following main target areas :

- 1998 :    Focus on central routines and the basics in the revised index.
- 1999 :    Improve efficiency – implementation of the new methods to all cities
- 2000 :    Tests and further improvements – preparing for national coverage

Implementation of new information on weights from the Expenditure Survey 1996/7 (ES1996/7) will have to influence the time schedule and timing for the various elements of the programme to be sketched out later in chapter 5. A separate updating of weights is in the current state of affairs not recommended without a concerted updating of the basket of goods and services. Price data for new items in the new basket have to be collected to establish a price basis (December 1998). Due to this the scheduled plan for the first publishing of CPI based on new weights, including the new basket, is proposed to be implemented for the index from January 1999. A new IT-system has to be developed for improving efficiency and data validation procedures. Even this task should start in 1998. It is also recommended that the dates for publishing are adjusted somewhat - to the 10 in each month – and be the same for all provinces.

Before launching the suggested programme the issues discussed in chapter 4 should be clarified and conclusions drawn.

The analyses of current methodology is based on discussions with several persons within INE. We especially like to thank the leaders of the Economic Statistics Department : Dr. Valeriano Levente, Vice President; Dra. Amelia Muendane, Director of Department for National Accounts and Short-

term Indicators; Dr. Firmino Guiliche, Head of the Price Statistics and Short-term Indicators-unit. We also like to thank the delegation leaders in Nampula (Dr. Namahala) and Beira (Dr. Carneirho). Important information on current practises in detail has also been achieved from discussions with members of the CPI staff in all three cities.

The methodological report which as available in advance of our mission to Mozambique has given a basis or an outline for further inquiries and understanding of the CPI system. A technical documentation of the IT-system used for producing the CPI (Clipper 5.0 / dBase 4.0) made by Italian consultants has also been made available.

Meetings with representatives of some of the user-environments have been arranged – World Bank (WB), National Bank of Mozambique (BM), Department of Finance (MoF), International Monetary Fund (IMF), the Norwegian Embassy and National Accounts section. The representatives of MoF provided much information of relevance on the short-term history of the CPI. Interesting views were also presented on methodological issues. Our attention was also drawn to some user needs for a revised CPI. In general it has been interesting dialogues about the macroeconomic-environment in which the CPI operates. Only to a limited degree have the other meetings focused directly on CPI. Interesting and respectable opinions and perspectives on the INE were expressed.

We should add that the opening week was somewhat coloured by problems due to language – although everybody has been helpful in assisting us. Some members of the CPI-staff have a good knowledge of English, but are not comfortable in making use of it when it comes to technical aspects of the statistics. The situation has no doubt improved somewhat due to good will from the leaders and the staff.

## 2. CPI – a key indicator

In most countries the CPI is an important indicator serving several purposes. The traditional use is based on the cost-of-living philosophy where the CPI is used as an instrument for monitoring the price changes facing the households between two points in time. The overall purpose of this has been to give the households a safeguard against an increase in the cost-of-living, and where compensation has been given in accordance with predetermined rules. During the last ten years or so the traditional philosophy has been challenged somewhat. In the fight against inflation some countries have redefined the overall purpose of the CPI – to be an indicator of the inflation. The use of CPI for this purpose implies that one restricts the analysis of inflation to the consumer sector – leaving out other important factors behind the inflation phenomenon.

The index has several other important uses as well. The CPI is normally used in the National Accounts for deflating purposes. The central bank as well as the commercial banking environment use the CPI in monitoring inflation in interaction with external trade, exchange rates, money supply and interest rates. In addition users in private sector (industry) utilise the index for cost escalations or price adjustments.

In most countries the CPI has a very special function for the statistical offices; it is one of the most frequently used indicators, often highly focused in media and also well known to the public in general. The frequent exposure in media and the focus from user environments have also made the index serve as an indicator of the professional current state of affairs within the statistical offices. Due to this, much time and effort are spent on developing the CPI methodology and procedures to keep up with the recent research in the field.

# 3. An analysis of current methodology

As mentioned discussions with the central staff has been an important source for this chapter. The field studies, in Maputo, Beira and Nampula added important information for our inquiry. By visiting markets, official and unofficial, and shops together with the price collectors we have gathered experience on how the staff deals with the problems they face in their job. In Beira and Nampula we also had discussions on the more theoretical aspects of the CPI. The meeting with this highly qualified staff gave us valuable input to our investigation into the CPI-unit's level of competence.

## 3.1. Summary

Practice and techniques exploited by INE, in computing the CPI on a monthly basis, are done very thoroughly. The staff is doing their job well, when it comes to running the survey as it is set up. In some aspects of the CPI the choices made on methodology can be recognised from the practice in other countries, like the Bureau of Labor Statistics, USA and Istat, Italy. Other parts follow recommendations made by the International Labor Organisation in their publication covering the issue of constructing a CPI.

In addition to what is mentioned we would like to add some main issues that should be dealt with:
- We have a strong impression that the CPI staff have their focus too much on measuring the level of prices very precise and correct, while the aim of the CPI is indeed to measure the change in prices. This is a diversion of focus which might yield unwanted results.
- The staff seems to lack the ability to adapt the current surveys, or create new ones, in order to make the CPI continue measuring the ever-changing reality in a comprehensive manner. The very rapid rate of change in the Mozambican economy, has made the existing solutions obsolete for some parts of the Index. The result is an index which measures inflation in a conservative way, most probably understating the true rate of inflation.
- The construction of an CPI and the competence of the staff must be dynamic in the sense that changes in the environment are coped with. The Mozambican economy has regulations in areas like housing, salaries etc. Many things seem to have happened during the last years of transition to a market based economy. Examples are – government selling houses, and indications on rents for tenants above regulated levels (legal or not) etc. The near future might bring further deregulations. The CPI-system must be set up to cope with almost any new reality.
- The weights and the basket of goods and services are in urgent need of updating. The problems faced by the price collectors in having a good relationship with the shops and markets, as well as the problems in measuring prices on food items also have to be studied and solved.

## 3.2. Main uses of the Consumer Price Index

In order to assess how well defined and computed the CPI is, knowledge about the user needs is very important. Only then can one judge the findings correctly. Our investigations have returned the following list of uses for the CPI:

- Deflating. For the purpose of calculating National Accounts in real terms the CPI is used for deflating relevant parts of the accounts, e.g. the consumption block.
- In formulation and evaluation of the policies of prices and salaries.
- Indicator of inflation.
- When analysing the macro economy the CPI is an key indicator.
- Cost and price escalation in the various sectors of the economy.

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## 3.3. Basic components

In the rest of chapter 3 we will make a tour through the survey set-up. This will be in the form of short comments and facts, written for persons familiar with the methodology of price indices. We shall also attempt to evaluate the findings.

The scope of the index is to measure the evolution in the cost of living as experienced by a defined group of private households in Mozambique. The households are chosen on basis of the level of their income. In addition the CPI shall also be an indicator of inflation. The resident concept is used in defining the population, i.e. that the index shall take into account all households (in the correct group of income) in Mozambique, which are citizens of the country. Foreigners living in Mozambique are disregarded. (this is our impression after discussions – although not confirmed).

INE started the task of producing the official CPI for the public in January 1997. The index included price observations from the three largest cities in Mozambique: Maputo, Beira and Nampula. From December 1997 the national index has been made up of solely the Maputo index.

A Laspeyres-formula – fixed weights – is used at all levels of the index. The Laspeyres-formula is used widely in calculating this type of an price index all over the world. The idea behind the Laspeyres-formula is that it measures the difference in price for purchasing exactly the same basket of goods at two different points in time. This gives the index a very precise interpretation as an index set up to measure the change of prices only. Other changes, e.g. in weight or quality, should not be reflected in the index. The main disadvantage of this formula is believed to be its inability to adapt to new behavioural trends in the population. If the CPI is supposed to measure the development in the cost of living it is of utmost importance that these changes are incorporated into the CPI on a more frequent basis than has been possible so far.

No chaining is being used in the CPI, even though this is recommended in the literature.

Laspeyres price index formula: $I_{t,0} = \dfrac{\sum_i P_{it} Q_{ib}}{\sum_i P_{i0} Q_{ib}} * 100$

where:

$P_{it}$ = the price for the $i^{th}$ item in comparison period t
$P_{i0}$ = the price for the $i^{th}$ item in reference period 0
$Q_{ib}$ = is the quantity of the $i^{th}$ item consumed in the expenditure base period b.

In the current calculation of the CPI, the base, or reference prices, are the prices from December 1994 for Maputo. The base prices are taken from December 1995 in Beira and Nampula. A simple average of the prices from these months is used. There are no procedures for the updating to new base prices. It is not clear to us how the differences in base-period are handled in computing the national index, but there are evidently done work to solve this. We have not been able to study these solutions. Uncorrected, the differences in base prices would possibly cause some minor inconsistency in the resulting national index.

## 3.4. Current weighting structure

The lack of routines for updating the weights is partly explained with the absence of a periodic Household Income and Expenditure Survey. It is normal to update the base prices at the same time as one updates the weights. In order to secure consistency, these two foundations of the calculations should refer to the same time period.

The weights currently being used are taken from the latest published Household Income and Expenditure Survey covering about 1100 households. The reference population for the current weights is the population of Maputo city and of the capital cities in each province, cut off by an upper and a lower limit for the level of income. The three different sets of weights are found in appendix A. The survey was carried out in Maputo in 1991-92 and in Beira and Nampula in 1992-93. The results, and the weights computed from it, are influenced by the Civil War. There was only a small supply of goods to the markets. The war probably forced the majority of the people to adapt to a new pattern of consumption, different from what they would have chosen in a situation of peace. No other source of information is used in establishing the weights in the CPI.

When inspecting the current weights it is quite clear how important food is in total private consumption, this group makes up some 76-79 per cent of the total expenditure. It is important to have a good coverage of this group of items having such a large impact on the index. On the other hand, other item groups, like radios, are more complicated to measure correctly, and for this reason deserves more attention than what solely the weight indicates. In general the weights seem reasonable, taking into account the low level of income of the reference population. For example housing has a substantially lower weight than what one observes in more developed economies.

But some oddities have struck us, for example, the weight of clothing in Nampula seems to be questionable, compared with the same figure for Maputo and Beira. The weight of this group is 862 in Nampula, while it's only 297 and 395 in Maputo and Beira respectively. This might be due to small samples in the ES, resulting in unstable estimates of the regional expenditure shares. Our investigation into this topic has been limited, mostly caused by the fact that the figures from the new Household Income and Expenditure Survey have not been available to us.

An updating of the weights should be carried out as soon as possible. Both the ending of the civil war and the economic growth since, lead to a likely conclusion that the existing weights might not be very accurate in reflecting the current pattern of private consumption. Especially if there has been substantial changes in relative prices, the availability of goods or the average level of income, there are good reasons to believe that the weights are outdated. It can easily be argued that all these three phenomena have been experienced in Mozambique over the last 7 years.

## 3.5. The sample of representative items and outlets

### 3.5.1. The representative basket
The number of representative items which constitutes the market basket of the CPI varies between the three cities.

Table 1. Number of representative goods and services

| n | Maputo | Beira | Nampula |
|---|---|---|---|
| Marketplaces | 61 | 48 | 59 |
| Shops | 112 | 111 | 79 |
| SUM | 173 | 159 | 156 |

In total the number of representative items seems reasonable. But one should expect the number to be increased as the level of income in the population increases. Differences between the sets of representative items are caused by regional variation in consumption, although this dimension is not fully taken into account. In Maputo most imported goods arrive from South Africa, where as in Beira the main source is Zimbabwe. This is reflected in the brands of goods that are available in the respective cities, and should to a larger extent be allowed to influence the goods constituting the

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basket of representative items. Also differences in the preferences of the population between the cities give reasons to differentiate the province's baskets of representative items.

There are no routines for updating the baskets of representative items. This is most likely a problem, causing an inaccurate measurement of the true rate of price increases. When new goods are introduced into the markets, and becomes a significant part of the households expenditure, it is dangerous if the CPI is not capable of adapting to this new structure of private consumption. It is not always necessary to have updated weight information to do this updating of the representative items at the most detailed level. But at a lower frequency one should make a more thorough survey of the weights, and have these updated as well. It is important that the CPI includes new items, and excludes outranged ones, within reasonable time (annual basis). When items during the intermediate period are temporarily or permanently out sale, exclusion of items and corresponding adjustment in base prices are to be preferred for the existing solution used – copying the price. If not, the CPI will constantly be measuring something which to a larger or smaller extent is different from what it is meant to measure. In practice, an outdated basket of representative items will cause frustration among the price collectors as they are sent out, time and time again, to collect prices for goods which no longer exist. This frustration and the consequent attitudes of the shop owners might in the end be just as detoriorating for the CPI.

Items in the Household Income and Expenditure Survey, which have a relative high importance in consumption are included in the CPI. There are advantages in establishing a more formalised rule for when an item has to be included. One option is to predefine that, for example all items with a relative share of 0.5 per cent or more shall be included.

### 3.5.2. The frequency in data collection
The index is computed on a monthly basis. This is also the frequency for some of the price collections. Most of the prices are collected on a weekly basis, mainly food items observed in the markets. The introduction of weekly collection of prices started in 1992/93 when INE aimed at computing and publishing a weekly CPI. Prior to this the weekly data collection were restricted to two weeks – the mid-weeks of the month. Later the collection was extended to cover four weeks with the ambition of making a weekly index. This ambition was later abandoned but the weekly collection programme remained. The explanation for this was that the prices of most food items vary a lot within a month. The argument of variability in the price levels is true, but a continuation of the weekly programme seems very costly and without having a pay back in proportion to the effort.

### 3.5.3. Price concept
What should be measured by the CPI is the actual transaction price paid by consumers, which may differ from the recommended, official or list price. If there in general is a discount available, this should be taken into account. It is important to measure what prices most consumers are in reality faced with. If the unit price varies according to the number of units in the package, or its weight, one should measure the price of the most typical quantity. If the good in question is important, one might consider including more than one size or weight. If a discounted price is offered to selected customers this should not be taken into account, unless most customers obtain this rebate.

As the practice is to day for a good on sale, its price will not be recorded. The reason for this is hard to understand. If a good is on a general sale in the store or market, then the sales price is what the consumer pays and it should be reflected in the CPI.

### 3.5.4. Questionnaires
The main input to the calculation process is information from the weekly field trips conducted by the price collectors. When collecting prices the field staff uses two different booklets for recording the prices, each containing a different part of the market basket. There is one form for the collection of prices in the markets, and one for the collection of prices in the shops. In the booklet, or the form, for

markets the representative items are described in a general way. The level of specification of the representative item varies between the items in the market basket. For some goods the specification is done complete with brand and weight. In other cases only a general description is given. It is then left to the collector to make notes of the volumes, quality and other relevant characteristics necessary to ensure that prices are collected for the same good in the different shops and over time. The form for the shops does not contain any information on the items other than what the collector enters. During our investigations we have not been able to obtain a complete and separate list of the goods for which the prices are collected in shops. But we understand that for a few items prices are collected in both markets and shops.

The booklets used are item specific, not outlet specific. The forms can be found in appendix C. All the forms lack fields in which the field staff can enter additional comments which could help explain the observed changes in prices. If there is, for example, a new brand for which prices are collected this should be noted, as it would be of great help in validating the data. Also if there is small supplies of a specific good in Nampula, the knowledge of this should be transferred to Maputo for the purpose of easing their validation of the data.

### 3.5.5. Areas covered
The price observations are done in three different urban areas spread over Mozambique: Maputo in the south, Beira in the middle and Nampula in the North. These locations are chosen according to the demographics of Mozambique.

No price collection is done in rural areas, although it is indicated that approximately 75 per cent of the population lives in rural areas. If one is to widen the scope of the CPI to cover the whole population of Mozambique (include population outside the cities), one should consider including these areas in the price collection as well. An argument for still excluding the rural areas could be that one has reason to believe that most people make their money-purchases in the urban areas, regardless of their place of living. This has been found to be fairly representative for other countries in this region. Prices are collected either centrally or locally in the field. Rents are an example of centrally collected prices. The staff in Maputo collect the prices from official publications and enter them into the index. This method of gathering information is cost efficient, but one must keep a close eye on the development of the markets which are covered this way.

All markets, which are included in the sample, are visited every week of the month for the purpose of collecting prices. According to the plan regulating when, during the week, each market is to be visited; the markets are to be visited on Tuesdays and Thursdays – as the general rule. For several months the rules are not followed exactly. In order to ensure comparability between the different observations made at the same site, one should put effort into making the price collectors visit the same market at the same time (day and hour) every week.

Prices are collected on all working days, except Wednesdays. The weekly plan is:

- Mondays and Fridays in the shops
- Tuesdays and Thursdays in the markets

The plan for data collection is the opposite in Beira. The reason for this is unknown, but as a general comment much effort should put into having the same schedule for all cities.

The shops are stratified (according to branch) so each shop is visited once a month, but every week some shops are visited. Areas to be visited during the month are grouped in circuits where each circuit is visited approximately at the same time every month.

On Wednesdays the collectors meet at INE to report and validate the prices. If necessary, additional field trips are carried out on Wednesdays for clarification.

### 3.5.6. *The average price and the weekly collection programme*

With focus on measuring price changes from month to month there is a danger that the frequent collection of prices on food items might be in excess, and thereby crowd out the need for better measurements for these items as well as the collection of prices on other goods. As pointed out earlier; there are other important items that should have been included in the basket and for which the measurement of price changes are more difficult.

There seems to be put too much effort into obtaining a good estimate of one months' price level, while the purpose of the CPI is to measure the evolution of the price level, i.e. the change of prices. One can then, in some aspects, disregard the correctness of the price levels as long as one makes observations which are consistent over time. If one, for example, collects prices of tomatoes in the second week of each month throughout the year one need not worry that the resulting average prices are representative for the whole month, which they probably are not. It suffices that the resulting price changes are representative, which is a much more easily obtained constraint.

We have analysed data from Nampula which to a larger extent confirm these thoughts. By constructing indices for each week in the month for the period January 1997 to February 1998, and compare these with the index based on the average price of all weeks we can form an opinion on the correctness of our hypotheses. The different indices are graphed – see next page.

As seen from the graphs, there are no significant large differences over time between the indices constructed from the weekly data – of the mid weeks – and the index made up of all the weekly data combined.

When considering this the reader must bear in mind that the average monthly prices do not give a true picture of neither the price level of the month nor provides a true basis for measuring the price changes from month to month. The true price level for a month will normally vary depending on the amount of sales made at the weekly prices. The weekly prices will show variations for many reasons but normally be highly influenced by the supply in the market. If consumers in addition adapt to the price levels by adjusting their volumes – which is most likely – lowered volumes of sales will follow higher prices and vice versa. An implication of this is that a simple average price normally will over- or underestimate the true price level. Due to this the index based on simple averages will normally not reflect the true changes in prices.

**Product 1101111 Arroz Corrente. January 1997=100**



- - - - Week 1    - - - - Week 2    - - - Week 3    - - - - - Week 4    ———— Average
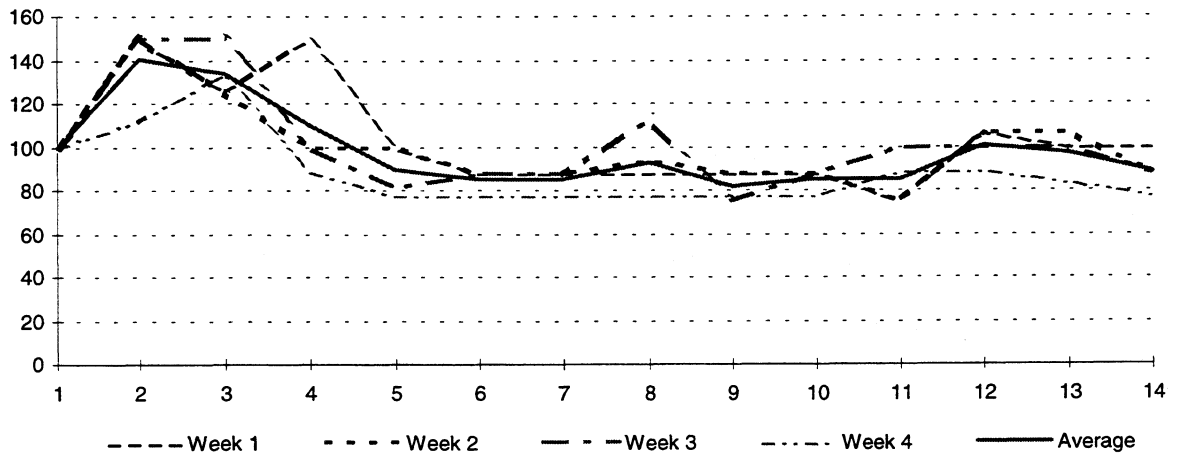
**Product 1101211 Farinha/Milho Branco. January 1997=100**
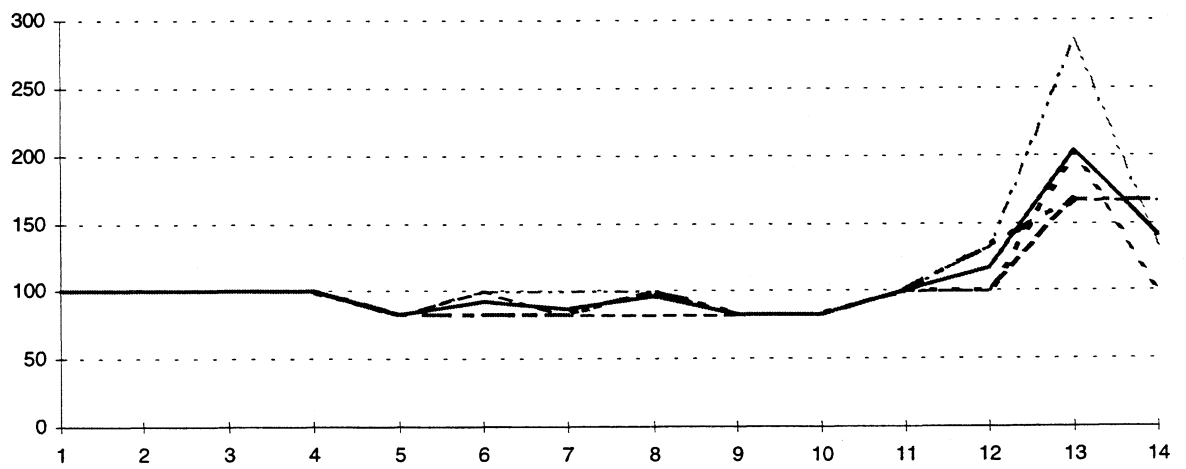


**Product 1101311 Esparaguete. January 1997=100**
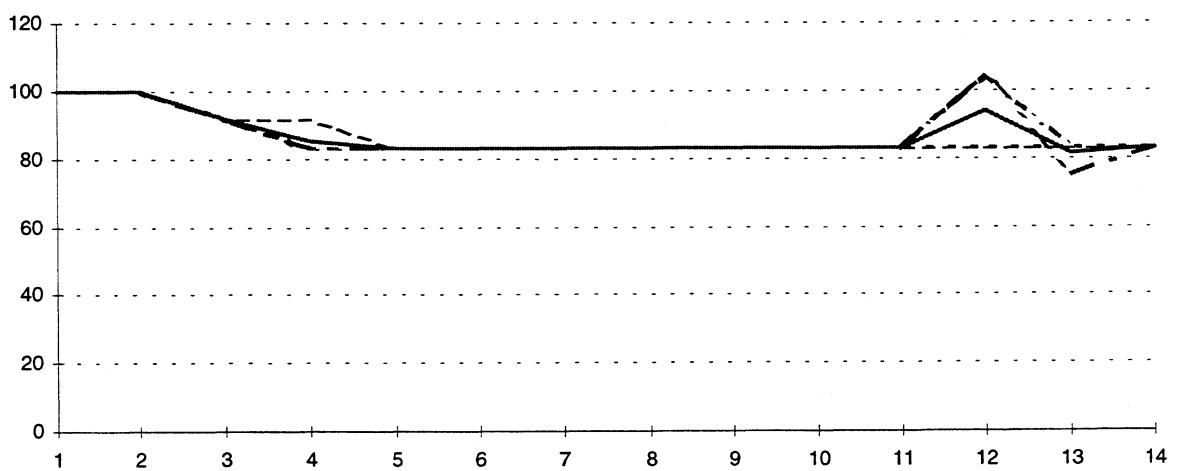
The main point of this discussion is that – for almost all types of uses of the CPI – measuring price changes over time based on data for one week or a four week average will serve the same functions. The overall quality of the index does not rely on a continuation of the weekly collection programme. Our impression is in fact that the effort put into the weekly programme removes the focus and capacity from other important areas where much could have been achieved in improving relevance of the CPI. Abandoning the weekly programme for a monthly programme strengthens capacity and improves cost efficiency and releases resources for improvements in measurement of and extensions in the number of food items as well as extensions in the non-food part of the basket.

### 3.5.7. Special issues in measuring prices

The same reasoning can be applied to the price collectors' inability to obtain prices for the same quantities over time. If we return to the tomato-example, one can observe that the price of a bundle of tomatoes is fairly constant during a day, but the size of the bundle will increase as time approaches closing time. The knowledge of the existence of this pattern should be exploited: if one collects prices at the same market at the same hour of the day each time, the size of the bundle should not vary much. Then one can directly observe the change in price, without estimating the per kilo price before the computations of the index.

As one understands, the task of obtaining observations of the same weight of a good over time is not trivial. Especially in the informal markets the weights vary a lot during the day, between days and over the seasons. Every third month the price collectors will buy some of the items, and bring them back to his office to weigh them. This weight is then entered as the current weight, and will only be adjusted on the basis of subjective judgement until next time one purchases a unit. Most shopkeepers are unwilling to let the price collector use the scale at the market, necessitating the purchase to establish the exact weight. This system is not easy to operate, it makes one operate with incorrect weights most of the time and is frustrating the price collectors to an extensive degree. A more robust and easily operated method should be sought for solving the problem of the varying weights.

We would also like to stress the importance of collecting prices for typical quantities. If the consumer usually buys 250 grams, the CPI staff should not try to obtain the price of 1 kilo. There is good reason to believe that the change in price is different for different packages of the same good. Typical examples are: discounts when sales of larger amounts, big cans of beverages are relatively cheaper than small cans due to marginal cost of producing the can etc. The very basic point here is that the CPI when measuring the changes in prices shall reflect the changes as these are experienced by the majority of the reference population.

The collection of prices, especially in Beira and Nampula, has yielded data of such a quality that the INE has launched investigations. The conclusion so far has been that the data do not meet with the necessary requirements on quality, and they are therefore excluded from computations of the national CPI. The objective grounds on which this conclusion is reached is somewhat unclear to us. But there seems to be several factors contributing to the inferior quality of the outcome from data collection:

- The price collectors lack training. It is not sufficient to present the forms for price-entry, and read through different fields, and then regard the training of the price collectors to be completed. The field staff needs a basic understanding of the objectives of an Laspeyres-price index in order to be able to make the correct judgements while collecting data. For example what to do when the pair of shoes one has been collecting the price of for months no longer exists in the shop. It is not viable to believe that the price collector will judge these situations correctly without proper understanding of the scope of the CPI. This training is valuable even if the staff has a low level of basic education.
- Lack of clear instructions to the price collectors. When out in the field the staff should have available a written instruction to consult when in doubt.

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- Uncooperative shopkeepers. During our discussions with the collectors attention has been paid to the problems when facing uncooperative salesmen at the markets every week. In general there is no single solution to this problem. Several strategies are used in most countries. One contribution to reducing the relation problem will come from the effect of lowering the frequency in data collection. In some cases the problems can be solved or eased giving more information to improve the salesman's / shopkeeper's understanding of the purpose and importance of the collection. This can be done both in advance of starting collecting at a site, but also during the period one visits the site. In some cases handing out publications of the CPI has improved the relation to the shop – just showing the uses of the data. In other cases the problems seem to be based on suspicions and fear for government control combined with data collection for CPI or covered as such. A routinely rotation of the sample of outlets will reduce the burden on each shop. Just the collectors' ability to indicate when he no longer will visit the shop will most likely improve the situation. Much could also be achieved in the field using general and specific PR-campaigns, to make the public more aware of the purposes and needs for economic statistics. Such solutions are suggested in the new 5-year plan to be launched shortly.
- Varying weights of items to observe. This wide spread phenomenon, combined with the non-existence of a good practice on how to handle it, has led to many unlikely price movements being registered. Much of this problem can hopefully be solved by collecting prices at the same time of the day every time in each outlet. In solving this problem one should bear in mind that the recommended practice has to be easily operated by the price collectors.
- Lack of representativity of the basket. When asked to collect prices for goods which no longer exists in the market the field staff is obviously made to accomplish a task without a good solution. This problem has to be solved by updating the basket.
- Inconsistencies in the Clipper programmes. Our inspection of raw-data, as they appear after being registered into dBase by using the Clipper-application, has revealed inconsistencies. In some cases an observation has received a computed unit value of zero, even though neither the price nor the weight collected is zero. In other cases codes which are not defined in the system are accepted as valid. We found these to be surprising, the programme should not allow these kinds of data being entered. One argument used by the province users was that it seemed as if the programme itself produced inconsistencies, which is – if correct – even more of a problem.
- Inadequate management. There has been too little resources allocated to supervise and advice the field staff. This problem is recognised by INE, and the situation is already somewhat improved. Taking into account the low level of training given to the field staff, it is even more important to make sure there is an operating management supervising the collection of prices. In the provinces the total workload might be too large for the management to cover all their tasks with a stable quality over time.

**Table 2. Number of markets in the three cities covered during price collection**

| Marked | Maputo | Beira | Nampula |
| --- | --- | --- | --- |
| Official | 10 | 4 | 1 |
| Unofficial | 5 | 2 | 7 |
| SUM | 15 | 6 | 8 |

The relative coverage between the cities seems to be good. The more people living in an area, the more important it is to have a good measurement of its price changes. But the division of the total number of observations between official and unofficial markets ought to be reconsidered. A vast majority of the population seems to make their purchases in the unofficial markets. This is explained by the lower level of prices here, and that these markets are located closer to where they live. If this picture is correct, this should be reflected in the CPI, giving these sites a proportionally larger weight than the official markets. This is the reversal of the situation of today.

There are several ways of achieving an improvement in the representativeness of the sites of collecting prices. One could weight the prices observed at the different kind of locations explicitly, or one could adjust the number of observations to achieve the same without the use of weights. The adjustment should be carried out so that the overall quality of the index does not suffer.

### 3.5.8. The sample of outlets

Locally collected prices are collected in shops or in markets, both official and unofficial markets are included. Luxury shops, and smaller mobile shops (ambulantes) which are selling cigarettes, beer and various other articles on the streets, are excluded from the sampling population of retail outlets. Although the exclusion of luxury shops literally seem consistent with the definition of reference population for the index (poorer people), there seems to be a lack of a clear definition of what is meant by these two types of outlets. An inspection made in Nampula in a typical luxury shop showed that items more or less were the same as found in the regular shops used in data collection. The sole difference seemed to be the price levels which turned out to be somewhat above the normal level. As the level of income increases or if one decides to redefine the reference population these types of units should be considered included in the sampling frame.

When an outlet closes down it is important to replace it correctly. To remain the representativity of the sample of outlets, the replacement should be an outlet in the same area, offering the same range of items and offering the same level of service. To fulfil all these constraints will not be easy, but it is necessary to stress the importance of always having a sample which reflects the shopping patterns of the reference population.

How the sample is established seems not to be documented. We have so far not been able to find any relevant information on this. We have been informed that at one stage consultants from Italy used sampling of geographical areas, but in combination with a procedure for rotating data collection which most likely produced strange results.

The main part of the outlet sample is probably established by the use of socalled purposive sampling. This is a non-random method, where one utilises personal knowledge to handpick the units one believes is necessary to obtain a representative sample. The main disadvantage of this method is obviously the high influence from the subjective judgements. In lack of an updated business register one must use other means to ensure that the sample is more representative with respect to branches, regions, and sizes of the stores than direct random sampling of the outlets.

One way is to sample geographical areas. What is sampled then is geographical areas, in principle all over Mozambique, in a manner that ensures that all distinct and significant areas are represented. In each drawn area or block, one will collect prices from the relevant retail outlets having office or business there. One is then using indirect random sampling, reducing the necessity for subjective judgements. We recommend further studies for developments in this field.

### 3.5.9. Data collection and coverage in Nampula

Our inspection of the raw data collected in Nampula in the fourteen months January 1997-February 1998 has revealed a low number of prices collected in the unofficial markets. On average – prices are collected for only 37 of the 59 items which one is supposed to collect prices for in these markets. The number of items observed in how many markets can be summarised as follows:

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**Table 3. Number of items covered. Selected weeks**

| Items covered by | Week 2 | Week 3 |
|---|---|---|
| All markets (7) | 4 | 4 |
| 6 markets | 23 | 22 |
| 5 markets | 6 | 5 |
| 4 markets | 4 | 3 |
| 3 markets | 3 | 7 |
| 2 markets | 3 | 1 |
| 1 market | 3 | 4 |
| Less than 1 market | 7 | 7 |
| SUM | 53 | 53 |

Approximately 50 per cent of the items are covered at less than half the markets, and seven items are on average not covered at all during the 14 months we have inspected. This low rate of success in obtaining observations is probably caused by several factors: outdated basket, limited supply to the markets and/or large fluctuations in supply due to seasonality, and lack of motivation and training of the price collectors. The result is an inefficient system for data collection where there should be plenty of room for improvements.

There are 13 items (or 25 per cent of the total number of items in the basket) which only are covered by two unofficial markets or less. These are: Farinha/Trigo Branco, Lulas Fresc, Camarao Medio Fresc, Carangueijo medio, Leite fresc, Repolho, Laranja, Tangerina, Ananas, Manga, Papaia, Farinha de madioca and Piri Piri fresc.

The situation is somewhat better in the official market (In Nampula there is only one official market in the sample). On average prices are collected for 41 items at the market every week.

**Table 4. Number of items grouped by frequency of observations. January 1997-February 1998**

| Number of observations | Number of items |
|---|---|
| < 10 | 4 |
| 10-19 | 2 |
| 20-29 | 5 |
| 30-39 | 8 |
| 40-49 | 6 |
| ≥50 | 28 |
| SUM | 53 |

Again we can see the same features of the distribution as in the informal markets. The majority of the representative items has a reasonable number of observations, while at the same time a substantial number of the items has no observations or a discouraging low number of observations. But the situation is overall somewhat better than in the unofficial markets.

## 3.6. The IT-structure

Most all data handling for the CPI – from data entry to computations of the index – is done on a system developed for personal computers. Consultants from both Peru and Italy have been involved in the development of these systems, most of the development of the system was done under a UNDP-programme. The software used is dBase, ver. 4 and Clipper, ver. 5 run in a DOS-environment. The system is documented by the developers in an engineering manner, complete and technical. No LAN-

facilities are being utilised. Excel is used in the final stage of preparing the index for publication. To check the aggregations done by Clipper, a parallel calculation is developed in Excel.

The CPI staff seems to have little, if any, programming competence in these tools. But they operate the available applications well. The data entry is done in a Clipper-application, which also is the tool for the control and validation process when prices and weights are entered. The same software is used for the calculation of the index. Raw data, as well as weights and base prices are stored in dBase.

Due to the fact that a rapid implementation of new weights and an updating of the basket of goods and services are expected to require some adjustments in the Clipper-application, we have had some preliminary discussions with an INE IT-specialist. Although tentatively the conclusion seems to be that adjustments to modify the existing system to an extensive degree are not advisable. This is mainly due to the lack of programming competence in Clipper in the CPI-unit. INE should instead attempt to acquire competence on a new tool and then rebuild a new system for the CPI on this new platform.

### Data entry and validation
After collecting the prices, the field staff enters the prices into the data base using the Clipper-application. The data entry system seems to work as intended and is handled in an efficient way by the users in Maputo. The province offices seemed to have some more problems using the Clipper-application – likely due to technical problems.

The operator starts a sequence by entering the identification code for the market or the shop. The programme will then display the text description for each of the items in the form used, one by one. The operator continues to key in the identification number of the item, the price and the unit. Although the system is handled well some amendments are needed to improve the efficiency of the application and some problems / errors must be solved.

The problem mentioned is that the system for data entry seems to produce types of inconsistencies and errors which complicates the verification of raw data. This is probably partly due to malpractice from persons operating the system, but more severe is that the system itself allows and produces inconsistencies. We have not been able to verify how far-reaching this problem is.

In the next sequence the programme estimates prices using the standard unit for the item. On the basis of the unit values and the prices, the programme will estimate a price for the unit which is wanted, e.g. 1 kilograms as the standard unit, for every observation of this item. The estimated unit price will form the basis of the calculation of an average price for each good.

For the purpose of validating the data the average prices of each week is inspected, in comparison to earlier weeks average prices. In addition, a test is done on the change in prices. If a current price yields a change from the previous month of 40 per cent or more, the market will be flagged as suspicious. All theses markets appear on a paper list, which is investigated manually. This will form the basis for further investigations.

The static 40 per cent rule in use is probably not adequate in validating the price data of today. When the rule was implemented there was a much higher level of inflation, making this limit more sensible. The CPI staff has not been able to identify how to adjust this prefixed limit.

For several reasons this routine should be changed. The purpose of checking the price relatives is to identify the extreme changes, and investigate these more thoroughly to assess the correctness of the observation. One then wants procedures, or tests which are calibrated in such a way that they are good at flagging suspicious observations, but it should not produce more to control than the staff can handle. Thus some rule for giving priority to the different extremes should be applied. Only listing all

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the observations with a change more than an accepted percentage does not fulfil these functionalities. It would be preferred to have these tests configured in a dynamic manner, making the limits of what is acceptable to a degree a function of the distribution of the current data material. Several such algorithms have been suggested in the literature and practice of CPI methodology. A system developed in United Kingdom, the Tukey algorithm, should be investigated and eventually utilised on Mozambican data.

With only price, weight and a code for the kind of market entered into the computer system it is very difficult to validate the observations, especially from Maputo. But also at the regional offices one is likely to run into difficulties resulting from the lack of additional information which would be useful in determining what impact the observations should be allowed to have on the CPI. It is a good principle that the validation of data should take place as close to the place of observation as possible. The ideal, following from this principle, would be to perform most of the validation procedures at the markets and in the shops. Checks based on comparisons with previously collected data should be made here. If prices or weights truly deviate substantially from what has been observed before, the price collector should confirm the correctness of the information by makeing a note, explaining the change. To ensure consistency across regions, central validations (Maputo) have to be done as well. For this purpose it is important that relevant information is brought along with the price data. This could be observation of the volume of supply of a good, the existence of a campaign for a good, new origin for imported goods or any other information helping to explain the observed price. The computer systems should be amended to store and encourage the use of this information.

In the process of cross-province validation and final computations done at INE (Maputo), it is very important that the communication with the regional offices is improved. In order to be able to interpret the data correctly one will in most cases need a close dialogue with the regional office from which the data originate. The cost of this is today much too high compared with the resources available.

## 3.7. Practical computation of the consumer price index

A more detailed description of the procedures of estimating the CPI can be found in the technical documentation mentioned in chapter 1.

Medium prices within each provincial capital are computed as unweighted averages (arithmetic averages) at the item level. The corresponding national average prices are computed as weighted averages of the provincial averages. Population figures are used as weights at this stage.
Simple indicies are computed at the city level as the relative of the current and the base average price, an analogue procedure is used to obtain national indicies on the item level.

Aggregates are formed as weighted averages of the simple item level indicies. The relative shares of consumption are used as weights. Weights are aggregated separately to obtain input to the estimation of national indicies at the aggregate levels.

See chapter 3.3 for some thoughts on the possible effect from having different base period for the prices in the various cities. In addition the fact that the base prices and the weights (both population- and relative shares of expenditure weights) do not refer to the same period is also a defect in the current application of the Laspeyres formulae, also highly likely to cause inconsistencies.

The aggregation of the item indicies on the national level must be suffering from the different baskets applied in each city. For some goods the item beneath a item code varies between the cities, for example what in Maputo is referred to as 1109131 Mandioca is different from the description of this item in Beira and Nampula, ref. App. 1. This problem one will also encounter when aggregating the simple item indicies into the general index for the whole country.

### 3.7.1. Imputations

Whenever a good or outlet, from which one usually observes one or more prices, is no longer in existence the INE has to make a choice on how to handle these missing observations. If one calculates, or estimates, a value on behalf of the missing observations, this is referred to as an *imputation*.

At INE the current practice is to retain and copy forward the last observed price of representative items which disappear from the market. For some goods, for example vegetables which in long periods every year are not available at the market due to seasonality, this is a reasonable practice. One then assumes that as long as the good is not in the market, the consumers are not experiencing any change in its price either. This is one possible way of handling goods with strong seasonal patterns, but there are other, and more refined, methods.

When the same practice of copying prices is applied to goods as films and newspapers it is more questionable. Here one should assume the consumers will substitute the disappeared good with another good. The new good might have an equal price and quality, or it might differ in these aspects compared to the old one. But over time these new goods are not likely to never change in price, which is what INE to day is implicitly assuming. In these cases it is important for INE to identify the relevant substitutes, and let them replace the disappeared item in the basket of representative items as soon as possible. In order to make the shift in representative item as well as possible, one actually would want to have overlapping price observations for the new and the old item for at least one period. The price collectors need clear rules on how to handle the disappearance of items.

### 3.7.2. Aggregation

There are two dimensions of aggregation. In computing the regional indicies one first aggregates the individual item indicies within each province. In the next step these general indicies are aggregated into a national index.

In computing the national CPI the price indicies estimated for the regional sites are weighed, according to the population of the respective cities, in order to give average prices which are representative for the whole country. The population weights are formed from the census held in 1986(?), which is the latest one available. This census is projected into 1991-figures, which are used in the CPI. A new Census was held in 1997, but the results are not yet available.

**Table 5. Current relative population weights**

| Capital in the provinces | Weight |
| --- | --- |
| Maputo | 3722 |
| Malola | 1455 |
| Gaza | 353 |
| Inhambine | 233 |
| Beira | 1230 |
| Chimoio | 417 |
| Tele | 444 |
| Quelimane | 564 |
| Nampula | 1084 |
| Liechinga | 249 |
| Pemba | 249 |
| SUM | 10000 |

There are alternatives to weighting by population. For example share of total consumption expenditure or some other relative measure of the level of the retail business could be used.

The aggregation into subgroups of items is done according to the PALOPE-standard. The National Accounts at INE is using ISIC, and is planing to introduce COICOP for the consumption block. Internationally the COICOP classification of consumption is widely used. The CPI unit should consider moving to this standard to improve comparability both internally at INE, and internationally.

## 3.8. Advisory committee

The National Statistical Institutes in many countries, including Norway, Sweden, England and USA, have had positive effects from appointing an CPI Advisory Committee. It is recommended that such a body also is appointed in Mozambique, to have advisory authority on the CPI. Meetings should be held at least yearly with the purpose of discussing important matters concerning the index. All proposals for change to the index methodology should be an item on the agenda of the committee before they are implemented into the index. The committee might have a wider focus, not only to cover the CPI, but also other statistics.

The members of the committee should consist of representatives from the most important users of the index, e.g. such as the Ministry of Planning, the Ministry of Finance, the Central Bank, possibly labour unions, employers' unions and consumers' rights unions. In addition more independent and theoretical points of view could be contributed by economists or statisticians from the Modlane University, so these also should be represented in the committee.

This committee would serve two main functions. First of all the quality of the index would most likely benefit from the ideas and opinions from such a competent forum. This would ensure that the index will benefit from developments in index number theory and adjust to the change in the user's needs. Secondly, by giving important users the chance to voice their opinions in this forum before changes are implemented, one avoids misunderstandings and heated public debates over these complicated and important matters. This would improve public reliability in the index.

# 4. Basic issues to discuss

On the threshold of a major revision including an updating of the weights, updating and extensions of the current basket adapting to the new consumption pattern and resampling of outlets, there are several issues that should be discussed and clarified. We would like to pay attention to several issues:

**The purpose which the CPI is intended to serve should be reconsidered**
Such a discussion would normally serve many purposes. It is important that it would clarify the overall goal by producing a CPI and some of the implications from this goal.
Although many perspectives could be adopted for such a discussion we would like to narrow the discussion somewhat by introducing two purposes : a *cost-of-living index* and an *inflation indicator or index* (which in practice restricts the inflation concept to the consumer inflation). The choice of one or the other will in practice have implications for the zooming in on the reference population. An inflation indicator is often restricted to the parts of the goods and services which are sold in markets or shops. Production for own consumption is to be excluded as well as is the case for the government financed private consumption – e.g. all or parts of health care. Excluding such parts will have an effect on the work on the new weighting base for the CPI. The two approaches might also influence the choice of methods in the data collection phase as well as the methods used calculating the price changes.

We would like to add that this discussion also would be very important for the CPI-staff – as a basis for their understanding and also the capacity and capability of maintaining and to develop the CPI in the future.

Without the intention of simplifying this discussion we nevertheless recommend the choice of a mixed solution – as a pragmatic solution. This allows for having the cost-of-living purpose as a base and a goal, but at the same time gives signals to the CPI-staff of measuring the market activities.

**What should be the reference population of the revised CPI ?**
The situation is that current CPI is based on a reference population restricted to the poorer inhabitants of the country. The reference population was in 1994 defined to comprise :

- the poorest people ; income :      6 182 - 17 481 Mt.
- the middle poor people ; income :    17 482 - 29 937 Mt.
- the less poor people ; income :     29 938 - 69 415 Mt.

All income-figures refer to 1991.

The current definition is most likely still relevant due to the fact that close to 90 per cent of the population are considered as poor – according to the UN definitions. So – if the overall purpose is to make a CPI for the poor inhabitants, adjustments should be made in the income-intervals to adjust for changes in nominal incomes. These could then be used in producing the new weights for the CPI.

Although many things seem clarified by what is mentioned above we still raise the question based on the experiences we have had during our mission to INE and the provincial offices. In general we are in favour of including all inhabitants of the country in the reference population (a domestic principle). The basis for this opinion is :

- the contribution from the non-poor parts of the population to the consumption patterns on food and basic products is most likely small or insignificant, but are expected to definitely be more influential on items like cars, televisions, high tech products etc.
- exclusive items solely bought by the more wealthy parts of the population are normally imported and will most likely have a different price trend (measured in real prices) than food items which highly dominate the current CPI. Whether measured in the CPI or not, the imports of exclusive items will have an effect on the national economy – however, without having measured any inflation effects using the current reference population.
- too much focus on food items in the current index – partly due to the definition of the reference population – disturbs the important but also complicated task of measuring the price changes on high tech products etc.
- the current population also seems to create definitional problems in the CPI. Several types of shops are excluded – labelled "luxury shops" – without having a clear definition of what a luxury shop is. The same principles or definitions – or lack of such – seem to have worked counteractive when it comes to discussions about extensions of the sampling population (e.g. ShopRite).

All in all much can be gained by extending the reference population to all inhabitants. And very likely without loosing control on the changes in the cost of living for the poorer people – the largest and the most vulnerable of any sub-populations. The index of the food items group in the national and the provincial CPI is most likely a good approximation when monitoring the development in the cost of living for the poorer people.

And in line with this – are there in fact several reference populations ? During our tentative discussions about CPI in the future several thoughts have been mentioned – separate indices for the urban and rural parts of the population, CPIs grouped by socio-economic groups or a separate index for the poorer part of the population based on principles used in the current index.

These issues must be thoroughly discussed and a conclusion reached early in the revision process. If such new statistical products should be decided included on the list among the short or medium term goals, e.g. intended to be put into operation within 1 - 5 years, the forthcoming revision of the CPI-system should be prepared for the future inclusion.

**The treatment of own production ?**
Another important issue is the treatment of own production. For a very large share of the households production for subsistence is predominant, where nothing or only small parts of the crops are sold at the markets. In the rural areas of the country one must expect that the marketed share is even smaller but that some kind of barter trade is more common. Should an estimated value of this production (equal to consumption) constitute a part of the weighting basis ?

When using the cost-of-living approach for the CPI this type of consumption – in our opinion – should be included. If the main purpose is put on measuring inflation, a basic principle must be that the non-marketed part should be excluded, although this might be debated by pointing to the fact that also the non-marketed part can have an impact on what is marketed.

However, this question turns out to be purely theoretical if there is no information on the size of own production. An answer to this might be given by the new expenditure survey (ES1996/7). If information is available one has to clarify how to estimate the value, which by no means seems as an easy task. For households living nearby district centers where such items are marketed, an option could be to use the prices available from the centers.

# 5. A revised methodology

The analysis of the current methodology has shown that amendments should be introduced in several areas of the CPI. The remaining parts of this chapter present and discuss the proposed changes in methodology within the framework of a three year plan. The following main issues are basic parts of the plan :

- Building competence and capacity
- Increasing the local responsibility
- Technical documentations of the revised CPI
- Short-term offensive updating weights and baskets
- Improving measurement – reducing frequency in collection
- Special surveys – tasks – for testing and further analysis
- Planning and developing a new IT-system
- A new consumption classification
- Extensions in national coverage

As mentioned in the beginning of this report the need for a short-term offensive towards updating weights and the basket of goods and services requires a front end loading of these tasks into the programme. Much of the tasks in 1998 will thus in all manners be concerned with achieving the short-term goals. Reaching these goals is to a large degree dependent on INE IT-competence and capability of developing new as well as making adjustments in existing systems.

## 5.1. Building capacity and competence

Building the competence and capacity of the staff to carry out reviews of methodology used in the CPI system requires actions and adjustments in several areas.

The basic part of capacity building is beyond no doubt the training of the staff and for the years ahead job training should have a special focus. Although some issues of the training would be dealt with using seminars and/or classess for smaller groups the large bulk should come through learning by doing. In the next year or so a large number of tasks have to be done – almost entirely performed by the CPI staff, however, under the supervision of the consultants during parts of the jobs. The consultants will also be available when needed for solving any special problems.

In addition to the training on the job we would like to pay attention to four other important issues :
- Organisation – communication
- Size of staff
- A system based on documentations
- Annual planning of operations

### 5.1.1. Organisation – communication

During our stay we have spent much time on achieving a professional overview of the production system and methodology. As a part of this we have also looked into some organisational aspects of the CPI system.

With the ambitions set for a revised CPI system – national competence and capacity for maintenance – sustainability, and national coverage as a medium term goal – strengthening of communication between Central unit and the province units – both in a technical and professional way – are required. Although plans have existed for some years nothing or little seems to have happened on improving the professional communication between Maputo and the provincial units.

One part of the problem – most likely a large one – seems to rely on budgetary and technical problems. The problems became evident when discussing these issues with members of the province delegations. Budgets on communication (post, telephone etc.) were extremely low already at total delegation level. Technical problems in communication and lack of equipment and technical support add to the overall picture.

### 5.1.2. Size of staff

An overall impression is that the current production routines seem to function well. Organisational changes implying movements of professional competence from Maputo to the provinces have most likely already removed some of the obstacles met last year in the process towards a national CPI. These movements have, however, also visualised the scarcity of professional competence in this field and the consequent vulnerability when it comes to competence for developing and maintaining a CPI system.

As a part of a strategy for a sustainable CPI system having the capacity of adapting to changes in the economic environment, we strongly recommend a strengthening of the central staff with 3 highly skilled economists. The tasks are numerous and will increase further this year and in the years to come. Due to this the escalation of the staff is recommended to start this year. The strengthening of staff is needed for building analytical capacity on methodologies on price statistics, for a close and more frequent follow-up / communication with the provincial units in training and advisory activities and lastly for building IT-competence in running and amending a new system required.

### 5.1.3. A system based on documentations

An extremely important part of the long-term capacity building is the documentation routines. Although time consuming – especially in the initial phases – and also to some extent challenging for people without training in structuring when writing, the positive outcomes for the organisation in the medium term turn out to be greate.

From a professional and administrative standpoint sound documentation routines are recommended for several reasons :

- Each task performed in the production system is documented – also when it comes to personal activities.
  In addition to the effects of having each member of the staff rethinking its own tasks in a new setting it has the overall positive effect of reducing the vulnerability when members of the staff are on long-term sick leaves etc.
- Increase the insight for all in all parts of the routines – both in main lines and details – providing a solid basis for understanding and stability in production. This will also create a professional basis for understanding and developing the CPI system.
- For highly educated staff a documentation and publishing strategy of results from special analysis or methodological studies might turn out to have a motivating effect (incentives).
- Lastly it will also contribute to reduce the often long-term negative effects when having turnover in staff and parallel lower the costs of introduction of new members to the CPI system.

### 5.1.4. Annual operating plans

Behind each of the issues to be discussed later in this chapter there are topics where some of the activities are of a periodic nature while others have a more frequent nature e.g. annual. For each step taken in the process towards a complete revision the number of annual tasks or routines will increase.

It is important that such tasks are institutionalised by the CPI staff and built into the annual plans. If no such plan exists today – in writing – it is strongly recommended that a detailed plan is made and subsequently that the new routines are added to the list. Most of the activities either current or annual will involve the province offices. Due to this they should be involved in the planning process. Copies must be distributed to all staffs in all provinces as well as leaders in the relevant units in INE.

Having a sound practice in planning and performing current as well as annual routines on time schedule provides information and insight to the staffs, motivates and maintains the competence in performing the planned tasks and simplifies the task of maintaining the CPI at a high level of quality.

## 5.2. Plans and activities – 1998

Focus during the first year will mainly be on Maputo and much effort should be put into improving the current routines, building competence and capacity. However, a special task would be to cover the short-term needs for implementing new weights, updating and extend the basket of goods and services and make the necessary adjustments in the sample of units to be followed during price collection.

One overall goal for the work to be performed this year is to prepare for publishing of a national index as well as province indices based on high quality data from all provinces. All indices are to be published on the 10th of February 1999 covering results for January 1999 and series back to January 1997.

In the presentation of the main projects further on in chapter 5 each subject is briefly presented as an introduction and objectives are given. In addition related activities are presented and discussed. Most of these activities will later on be planned further in detail. Each presentation ends with presenting a list of important outputs as well as giving a rough schedule.

### 5.2.1. A revision of weights

The current weights have most likely lost their relevance and an updating is needed. The progress highly depends on IT-resources for making adjustments needed in the existing IT-routines (Clipper / dBase).

New weights has to be established for Maputo, Beira and Nampula

**Objectives:**
The overall objective is to improve the relevancy of the CPI. Improving Maputo competence by analysis and training on the job for CPI staff.

**Activities:**
- Thorough work on the Expenditure Survey 1996/97 data – bearing in mind the defined reference populations (national level and province level – others). Inquiries should be done on item level to identify extremes having large influence on the averages and aggregates.
- Evaluating the quality of weights on item level data
- Comparative analysis – new and current weights
- Training the staff – improve the basic understanding
- Documentation

**Outputs :**
- New weights on item level – create or update dBase-file
- A documentation on revision of weights

**Schedule – supervision:**
The activities must be done during the end of the 2. Quarter – beginning of the 3. Quarter; mainly by INE staff. Supervision by the long-term consultant and the short-term consultant from mid-August (3 weeks). Additional resources are definitely needed to achieve the goals set for the short-term offensive.

### 5.2.2. Updating and extending the basket of goods and services

This task is closely related to establishing a new weighting structure. It is important to have a basket which correspond with the new weights. Large parts of the items in the current basket are not found in the shops/ markets. Due to this a thorough revision of the basket is needed. The weighting data on detailed level constitute the basis for sampling or selection of new items.

The scheduled plan for implementing an updated basket of goods and services is also dependent on the existing IT-routines (Clipper / dBase).

All activities must be performed in close cooperation with the provincial offices. The leaders and supervisors must be informed about the forthcoming tasks well in advance and shall also have the instructions to lead and perform the local works needed for achieving the optimal basket for each place. It is a task for the CPI Central to secure the overall representativeness in the item basket across provinces. Much effort must be put into making this operation functioning well.

**Objectives:**
The overall objectives are manifold although the short-term improvement in the relevancy of the CPI is basic. Training staff, analysing and documentation aim at building capacity. The updating work should be turned into an annual routine for updating of the basket.

**Activities:**
- Analyses on detailed information from ES1996/7 to identify important areas where extensions with new surveys might be needed (primarily new important non-food groups)
- Identify items (or groups of items) for further pilot testing – relevant where the CPI staff lacks measurement experience or where any other problems are expected. Solve special problems met during the test phase.
  Extend the item list with manufactured food items if relevant due to weighting data.
  Utilise the knowledge of price collectors in co-operation with the retailers (shop owners or staff) in the identified areas to make a list of potential goods and services which fulfils the following requirements : a) have a substantial share or volume in sales, b) are sold regularly – at least monthly. Additional information needed for the products behaviour in the markets is : imported / domestic, seasonal
- Analysing the current list of items to decide which items shall be discontinued.
- Make the final list of items (goods and services) – securing a fairly good spread on imported / domestic when such aspects are considered important for measuring price trends.
- Amending existing questionnaires – especially for the shops. Precise descriptions of the products.
- Detailed instructions for the price collectors – training on the job; visit to the provinces are most likely needed
- Start price collection on regular basis according to new list of items (October – December) and remember that all items on the current list used in the computations must remain on the questionnaire until end of December. Prices collected in accordance with the weekly collection programme. Price data for the 3-month period constitute the basis for analysing and producing base period prices (which shall be the prices for December 1998).
- Documentation

To limit the increase in the overall burden on the CPI staff this year it should not be considered necessary to establish a full coverage of items for the new areas, but each new area should be represented. One way is to limit the number of observations to be collected for new areas – to say 5 for each item. Further amendments will undoubtedly have to be done next year, so it should be acceptable to leave out some of the tasks until then.

**Outputs:**
- Updated and extended list of items – precise descriptions enabling the price collector to find the product – and later when the product is non-available to make notes on differences compared with new products.
- New instructions for the price collectors
- Amended questionnaires
- New set of base prices – December 1998
- A detailed documentation on new list of items – one from each of the provinces

**Schedule – supervision :**
The activities must be done during end of the 2. Quarter – end of the 3. Quarter; mainly by INE staff. Supervision by long-term consultant and short-term consultant from mid-August (3 weeks). Additional resources are definitely needed!

*5.2.3. Sampling*
This task must be performed during the same period as the analysis and the updating of the basket. As part of the short-term offensive the focus should be restricted to resampling in the three cities covered. Dependent on adjustments of the existing IT-routines (Clipper / dBase).

Even this task must be performed in close cooperation with the province offices. See 5.2.2 – at the top – for more about this.

**Objectives:**
Improving the relevancy of the CPI. Training – analyses and documentation of work. Establishing new annual routine for updating of the sampled units covering new areas (items and corresponding types of outlets) as well as exclusion of long-term non-responding units and respondents which need a temporary reduction in the response burden.

**Activities:**
- New outlets for price collection covering areas identified during the work on the basket. Selecting units for testing purposes using the price collectors knowledge about items and shops, unofficial and official markets.
- For regular sampling further work must be done by the consultants in cooperation with the CPI staff. Area sampling should be considered. See chapter 3.x for more about this.
- Documentation – one from each of the provinces.

**Outputs :**
- List of shops and markets for pilot collection of prices
- Updated list of shops and markets for regular survey (for further improvements in 1999)
- A detailed documentation on sampling procedures used in the regular survey

**Schedule – supervision:**
The activities must be done during the 3. Quarter; mainly by INE staff. Supervision by long-term consultant and short-term consultant from mid-August (3 weeks). Additional resources are needed!

### 5.2.4. A new IT-system
The new CPI IT-system should be developed on a new platform leaving the DOS-environment. A modern tool having a user friendly interface (type: windows) and an acceptable threshold as concerns the establishing of programming competence. LAN-facilities should be utilised to improve efficiency of the work. An important goal is that the central unit shall have the competence needed to make minor adjustments in programs. During the development phase IT specialist competence is needed. No other CPI staffs than the central one will be allowed to make adjustments in the programs.

The ambition is to develop the new system in full throughout the year. The operative goal is to start implementation from the beginning of next year. To fulfil this tight plan requires that the project is given high priority. The planning of this project must start in 2. Quarter this year.

It is important to have parallel running of the current and new system. This will produce a period of overlapping series, which will be used to asses the new system.

**Activities:**
- Choice of tool and platform for the new system
- Planning the new system including routines for data entry and identification of extremes – validation; describe all functions on detailed level; an INE team including a specialist from the IT-unit, working in close cooperation with the short-term and the long-term consultant.
- Adapt the existing item code system to the new consumption classification
- Planning of the new system for computing the province indices and the national index.
- The new system must be prepared for receiving data electronically

**Outputs :**
- A detailed plan for the developers
- A new system developed on new platform
- Start testing of the new system in the 4. Quarter

**Schedule – supervision:**
A very tight schedule throughout this year requires that much effort and resources are put into this project from the very beginning. Central staff should do all the work, however, assisted by long-term consultant – and the short-term consultant for a brief period in August - September.

### 5.2.5. New plans for publishing
The revised production system – although not completed – will start out using the new routines for publishing. The CPI should be available for the user within 10 days after the month covered by the survey. To achieve this an improved efficiency seems needed. One should also consider publishing on the www.

**Objectives:**
To improve the timeliness of the CPI.

**Activities:**
- Making a detailed plan for releasing CPI in 1999 based on the 10th in next month or on the date closest to the 10th when the 10th falls on holidays.
- Make the revisions needed in the plan for the data collection programme – all cities, to adapt to the new publishing plan. Data must be in Maputo – at latest – on the 2nd. each month.

**Outputs :**
- New plans for publishing
- Revised plan for data collection – detailed documentation

**Schedule – supervision:**
The activities must be done during the 3. Quarter; mainly by INE staff, to have time to practise the revised data collection plan. Supervision by long-term consultant and short-term consultant from mid-August (3 weeks). Additional resources are definitely needed!

## 5.3. Plans and activities – 1999
The beginning of this year will be filled with activities aimed at making the new system operate more efficiently. The number of observations and outlets included will be increased to improve the quality of measurements, some adjustments of the current routines and improving the performance of a new IT system are among tasks which most likely are needed. These tasks should be given high priority before initiating the 1999-phase of the revision programme. In this phase focus would be moved somewhat – towards implementing new routines in the other cities. Several important tasks remain to be done in the central unit.

The 1999-programme will cover two basic elements in the revision programme. Firstly, to prepare the introduction of a new consumption classification. And secondly, to start the testing of electronic equipment aimed at improving data collection and the on-site control and validation. The testing should mainly be done in the Maputo area.

The first element is to be put into operation in February 2000 (the release of the January index). The second task should be evaluated and a decision made whether to escalate the use.

### 5.3.1. A new consumption classification
The CPI publishing are based on PALOPE, a Portuguese classification. To improve the international comparability of the national CPI the ambition is to adapt to the COICOP – the current international consumption classification.

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The implementation of COICOP might require some further adjustments in the basket of goods and services as well as increasing the list of sampled units. Furthermore it might be practical to simplify the item code system.

Two short-term visits are suggested for 1999. The first in mid-February - March and the second in the beginning of the 3. Quarter – for planning the activities for this year more in detail, and supervision and support during the critical phases of the planned activities throughout the year.

**Activities:**
- Compare COICOP and PALOPE; identify implications for the data collection programme and make the adjustments needed. Increase in coverage of items and outlets might be necessary.
- If necessary suggest a new item code system
- Link the item code for each item to the correct COICOP group; needed in the computations when aggregation according to new consumption classification.

**Outputs :**
- Revised plan for data collection – updating of the detailed documentation
- Making a file or catalogue linking each item in the computations to the corresponding COICOP group.

**Schedule – supervision:**
The activities must start in the 2. Quarter; mainly by INE staff, to have time to make adjustments needed in the data collection programme. Supervision mainly by short-term consultant.

### 5.3.2. Electronic equipment in data collection
To improve the quality of the data collection one should test and evaluate the use of electronic equipment used directly in the collection phase. The use of such equipment would improve the quality of data and the cost efficiency in the data collection phase. Improvements in quality are due to the built in options for immediate control and validation of the data entered by the collector on site. The collector might also add additional information needed for the cross validation to be made in the central unit.

The testing phase would last for 6 months and should end up in a report providing a basis for making a decision whether to abandon or escalate the use of such equipment.

**Activities:**
- Make an agreement with the international provider of this type of equipment
- Start testing phase – establish a reference setting enabling for controlling the overall efficiency of equipment
- Make a decision on abandoning or escalation / full scale use of this type of equipment

**Outputs :**
- An analysis and recommendation

**Schedule – supervision:**
The activity should start in the 2. Quarter.

## 5.4. Plans and activities – 2000

Also the beginning of this year will be filled with activities aimed at improving the efficiency of the new system. The number of observations and outlets included will continue to increase to improve the quality of measurements. Some adjustments will be needed – before initiating the 2000-phase of the revision programme.

The 2000-programme will have its main focus on one element – preparing an extension of the coverage in the national CPI by increasing the number of provinces included. Several issues need to be clarified.

A decision has to be made on which province (s) to include. A very special focus should be put on the urban – rural dimension, due to the current coverage which solely is concentrated on urban areas. An increased coverage of rural areas – in a wide sense – would no doubt be costly and thus prohibitive. However, experiences from other African countries in this area have shown that the rural population buy most of their non-food items in the near-by district centers where markets exist. Due to this the cost of data collection might turn out to be more reasonable.

Other issues to be considered would be the weighting aspects – how to include the rural data in the province indices and the national index. And in the same context a decision is needed on how to handle the own production. Within the framework of a cost of living index – see chapter 4 – this is a important issue to clarify.

# The baskets of goods and services in Manputo, Beira and Nampua

Weights used in the Consumer Price Index for Maputo, Beira and Nampula, in per cent

| | Maputo | | | Beira | | | Nampula | |
|---|---|---|---|---|---|---|---|---|
| Item code | Item | Weight | Item code | Item | Weight | Item code | Item | Weight |
| 1101111 | ARROZ CORRENTE | 7.710 | 1101111 | ARROZ CORRENTE | 15.45 | 1101111 | ARROZ CORRENTE | 8.45 |
| 1101112 | ARROZ EXTRA | 4.160 | | | | | | |
| 1101121 | MILHO AMARELO | 0.870 | 1101121 | MILHO AMARELO | 2.52 | | | |
| 1101122 | MILHO BRANCO | 0.600 | 1101122 | MILHO BRANCO | 1.14 | 1101122 | MILHO BRANCO | 3.39 |
| 1101211 | FARINHA DE MILHO AMARELA | 3.290 | 1101211 | FARINHA DE MILHO AMARELA | 7.96 | | | |
| 1101212 | FARINHA DE MILHO BRANCO | 0.700 | 1101212 | FARINHA DE MILHO BRANCO | 4.09 | 1101212 | FARINHA DE MILHO BRANCO | 8.80 |
| 1101221 | FARINHA DE TRIGO NORMAL | 0.370 | 1101221 | FARINHA DE TRIGO NORMAL | 0.53 | 1101221 | FARINHA DE TRIGO NORMAL | 0.54 |
| 1101222 | FARINHA DE TRIGO ESPECIAL | 0.210 | 1101222 | FARINHA DE TRIGO ESPECIAL | 0.33 | 1101222 | FARINHA DE TRIGO ESPECIAL | 0.33 |
| 1101311 | ESPARGUETE | 0.170 | 1101311 | ESPARGUETE | 0.17 | 1101311 | ESPARGUETE | 0.38 |
| 1101321 | MACARRAO | 0.180 | 1101321 | MACARRAO | 0.19 | 1101321 | MACARRAO | 0.42 |
| 1101411 | PAO | 7.680 | 1101411 | PAO | 3.57 | 1101411 | PAO | 2.04 |
| 1101421 | BOLO ARRUFADA | 0.010 | 1101421 | BOLO ARRUFADA | 0.11 | 1101421 | BOLO ARRUFADA | 0.07 |
| 1101431 | BOLACHAS | 0.080 | 1101431 | BOLACHAS | 0.33 | 1101431 | BOLACHAS | 0.30 |
| 1102111 | CARNE DE VACA DE 2a LIMPA | 1.590 | 1102111 | CARNE DE VACA DE 2a LIMPA | 0.66 | 1102111 | CARNE DE VACA DE 2a LIMPA | 0.34 |
| 1102112 | CARNE DE VACA DE 1a | 1.000 | 1102112 | CARNE DE VACA DE 1a | 1.38 | 1102112 | CARNE DE VACA DE 1a | 0.38 |
| 1102121 | CARNE SUINA DE 1a | 0.170 | 1102121 | CARNE DE SUINO DE 1a | 0.39 | 1102121 | CARNE DE SUINO DE 1a | 0.49 |
| 1102122 | CARNE DE SUINO DE 2a. | 0.280 | 1102122 | CARNE DE SUINO DE 2a | 1.30 | 1102122 | CARNE DE SUINO DE 2a | 0.50 |
| 1102131 | CARNE DE CAPRINO | 0.170 | | | | | | |
| 1102211 | FRANGO VIVO | 2.470 | 1102211 | FRANGO VIVO | 0.99 | 1102211 | FRANGO VIVO | 4.19 |
| 1102222 | FRANGO MORTO LIMPO | 1.650 | 1102222 | FRANGO MORTO LIMPO | 0.92 | | | |
| 1102231 | PATO | 0.100 | | | | | | |
| 1102311 | CHOURICO DE CARNE INDUSTRIAL | 0.030 | 1102311 | CHOURICO DE CARNE INDUSTRIAL | 0.02 | | | |
| 1102321 | SALSICHA EM LATA | 0.120 | 1102321 | SALSICHA EM LATA | 0.02 | | | |
| 1103111 | PEDRA FRESCO DE 1a. | 1.040 | 1103111 | PEIXE PEDRA FRESCO DE 1a | 1.88 | 1103111 | PEIXE PEDRA FRESCO DE 1a | 0.91 |
| 1103121 | CORVINA FRESCA DE 2a. | 1.740 | 1103121 | CORVINA FRESCO DE 2a | 3.71 | | | |
| 1103131 | CARAPAU CONGELADO DE 2a. | 3.630 | 1103131 | CARAPAU CONGELADO DE 2a | 0.40 | 1103131 | CARAPAU CONGELADO DE 2a | 3.09 |
| 1103141 | PEIXE SERRA | 0.160 | | | | | | |
| | | | | | | 1103151 | ATUM FRESCO DE 1a. | 1.78 |
| 1103211 | LULAS FRESCAS | 0.030 | 1103211 | LULAS FRESCAS | 0.07 | 1103211 | LULAS FRESCAS | 0.10 |
| 1103231 | CAMARAO FRESCO MEDIO | 0.330 | | | | 1103231 | CAMARAO FRESCO MEDIO | 0.08 |
| 1103241 | CARANGUEIJO | 0.050 | 1103241 | CARANGUEIJO | 0.20 | 1103241 | CARANGUEIJO | 0.02 |
| 1103251 | AMEIJOA | 0.020 | | | | | | |
| 1103261 | CAMARAO SECO | 0.080 | 1103261 | CAMARAO SECO | 0.62 | 1103261 | CAMARAO SECO | 0.13 |
| | | | 1103311 | CONSERVAS DE PEIXE PILCHARD | 0.24 | 1103313 | CONSERVA DE PEIXE PILCHARD | 0.65 |
| | | | 1104111 | PEIXE SECO DE 1a. | 2.51 | 1103311 | PEIXE SECO DE 1a. | 3.74 |
| | | | | | | 1103312 | PEIXE SECO DE 2a. | 1.60 |

| Maputo Item code | Maputo Item | Maputo Weight | Beira Item code | Beira Item | Beira Weight | Nampula Item code | Nampula Item | Nampula Weight |
|---|---|---|---|---|---|---|---|---|
| 1104111 | LEITE FRESCO | 0.190 | 1103313 | LEITE FRESCO | 0.04 | 1104111 | LEITE FRESCO | 0.08 |
| 1104121 | LEITE EM PO | 0.190 | 1104121 | LEITE EM PO | 0.79 | 1104121 | LEITE EM PO | 0.20 |
| 1104131 | LEITE CONDENSADO | 0.270 | 1104131 | LEITE CONDENSADO | 0.39 | 1104131 | LEITE CONDENSADO | 0.50 |
| 1104211 | QUEIJO | 0.050 | | | | 1104211 | QUEIJO | 0.02 |
| 1104311 | OVOS DE GALINHA | 0.780 | 1104311 | OVOS DE GALINHA | 0.39 | 1104311 | OVOS DE GALINHA | 0.69 |
| 1105111 | OLEO ALIMENTAR | 4.020 | 1105111 | OLEO ALIMENTAR | 4.73 | 1105111 | OLEO ALIMENTAR | 4.48 |
| 1105121 | MARGARINA FLOR | 0.370 | 1105122 | MARGARINA STORK | 0.30 | 1105123 | MARGARINA PLANTA | 0.17 |
| 1106111 | ALFACE | 0.920 | 1106111 | ALFACE | 0.33 | 1106111 | ALFACE | 0.46 |
| 1106121 | CEBOLA | 1.770 | 1106121 | CEBOLA | 1.06 | 1106121 | CEBOLA | 0.93 |
| 1106131 | CENOURA | 0.070 | 1106131 | CENOURA | 0.01 | 1106131 | CENOURA | 0.02 |
| 1106141 | COUVE | 1.580 | 1106141 | COUVE | 0.87 | 1106141 | COUVE | 1.39 |
| 1106151 | REPOLHO | 0.130 | 1106151 | REPOLHO | 0.31 | 1106151 | REPOLHO | 0.25 |
| 1106161 | TOMATE | 4.880 | 1106161 | TOMATE | 1.70 | 1106161 | TOMATE | 1.18 |
| 1107111 | LARANJA | 0.160 | 1107111 | LARANJA | 0.09 | 1107111 | LARANJA | 0.29 |
| 1107121 | LIMAO | 0.110 | 1107121 | LIMAO | 0.03 | 1107121 | LIMAO | 0.10 |
| 1107131 | TANGERINA | 0.020 | | | | 1107131 | TANGERINA | 0.09 |
| 1107211 | ANANAS | 0.030 | 1107211 | ANANAS | 0.01 | 1107211 | ANANAS | 0.11 |
| 1107221 | BANANA | 0.180 | 1107221 | BANANA | 0.13 | 1107221 | BANANA | 1.06 |
| 1107231 | COCO | 0.670 | 1107231 | COCO | 1.32 | 1107231 | COCO | 1.12 |
| 1107241 | MANGA | 0.060 | 1107241 | MANGA | 0.08 | 1107241 | MANGA | 0.32 |
| 1107251 | PAPAIA | 0.060 | 1107251 | PAPAIA | 0.01 | 1107251 | PAPAIA | 0.20 |
| 1107311 | ANANAS EM CONSERVA | 1.260 | 1107311 | ANANAS EM CONSERVA | 0.01 | 1107311 | ANANAS EM CONSERVA | 0.05 |
| 1108111 | FEIJAO MANTEIGA | 2.450 | 1108111 | FEIJAO MANTEIGA | 1.84 | 1108111 | FEIJAO MANTEIGA | 1.57 |
| 1108121 | AMENDOIM | 2.090 | 1108121 | AMENDOIM | 0.89 | 1108121 | AMENDOIM | 2.72 |
| 1108131 | AMEDOA DE CAJU | 0.150 | 1108131 | AMEDOA DE CAJU | 0.07 | 1108131 | AMENDOA DE CAJU | 0.20 |
| | | | 1108142 | FEIJAO NHEMBA | 0.14 | 1108142 | FEIJAO NHEMBA | 2.51 |
| 1109111 | BATATA | 2.060 | 1109111 | BATATA RENO | 0.69 | 1109111 | BATATA RENO | 0.63 |
| 1109121 | BATATA-DOCE | 0.210 | 1109121 | BATATA-DOCE | 0.66 | 1109121 | BATATA-DOCE | 0.54 |
| 1109131 | MANDIOCA | 0.510 | 1109131 | MANDIOCA FRESCA | 0.05 | 1109131 | MANDIOCA FRESCA | 1.54 |
| | | | | | | 1109132 | MANDIOCA SECA | 3.07 |
| 1109211 | FARINHA DE MANDIOCA | 0.030 | | | | 1109211 | FARINHA DE MANDIOCA | 1.76 |
| 1110111 | AÇUCAR AMARELO | 5.190 | 1110111 | AÇUCAR AMARELO | 4.19 | 1110111 | AÇUCAR AMARELO | 3.13 |
| 1110112 | ACUCAR BRANCO | 0.610 | 1110112 | ACUCAR BRANCO | 2.08 | 1110112 | ACUCAR BRANCO | 0.52 |
| 1110211 | JAM DE ANANAS | 0.040 | | | | 1110211 | JAM DE FRUTAS | 0.01 |
| 1110241 | DOCES (rebucados loumar) | 0.060 | 1110241 | REBUÇADOS | 0.03 | 1110241 | REBUÇADOS | 0.05 |
| 1111111 | CHA PROLAR | 0.180 | 1111111 | CHA PROLAR | 0.14 | 1111111 | CHA PROLAR | 0.09 |

| Maputo | | | Beira | | | Nampula | | |
|---|---|---|---|---|---|---|---|---|
| Item code | Item | Weight | Item code | Item | Weight | Item code | Item | Weight |
| 1111121 | CAFE | 0.120 | 1111121 | CAFE | 0.17 | 1111121 | CAFE | 0.12 |
| 1112111 | SAL GROSSO | 0.210 | 1112111 | SAL GROSSO | 0.38 | 1112111 | SAL GROSSO | 0.74 |
| 1112121 | VINAGRE | 0.040 | 1112121 | VINAGRE | 0.02 | 1112121 | VINAGRE | 0.01 |
| 1112131 | ALHO | 0.400 | 1112131 | ALHO | 0.22 | 1112131 | ALHO | 0.06 |
| 1112151 | PIRI PIRI FRESCO | 0.070 | 1112151 | PIRI PIRI FRESCO | 0.04 | 1112151 | PIRI PIRI FRESCO | 0.08 |
| 1112161 | PO DE CARIL | 0.160 | 1112161 | PO DE CARIL | 0.15 | 1112161 | PO DE CARIL | 0.05 |
| 1112171 | CALDO DE GALINHA | 0.200 | 1112171 | CALDO DE GALINHA | 0.11 | 1112171 | CALDO DE GALINHA | 0.06 |
| 1201121 | REFRESCO EM GARRAFA | 0.310 | 1201121 | REFRESCO EM GARRAFA | 0.38 | 1201121 | REFRESCO EM GARRAFA | 0.16 |
| 1201122 | REFRESCO EM LATA | 0.330 | 1201122 | REFRESCO EM LATA | 0.38 | 1201122 | REFRESCO EM LATA | 0.16 |
| 1201131 | SUMO | 0.010 | 1201131 | SUMO | 0.11 | 1201131 | SUMO | 0.13 |
| 1202211 | CERVEJA/MEDIA | 0.450 | 1202211 | CERVEJA EM GARRAFA | 0.55 | | | |
| 1202212 | CERVEJA LATA | 0.330 | 1202212 | CERVEJA LATA | 0.55 | 1202212 | CERVEJA LATA | 0.74 |
| 1202231 | VINHO | 0.400 | 1202231 | VINHO | 0.31 | 1202231 | VINHO | 0.08 |
| 1202291 | AGUARDENTE | 0.110 | 1202291 | AGUARDENTE | 0.07 | 1202291 | AGUARDENTE | 0.35 |
| 1301112 | CIGARROS - FN | 0.190 | | | | 1301112 | CIGARROS - FN | 0.46 |
| 1301111 | CIGARROS - PALMAR | 0.220 | | | | | | |
| | | | 1301113 | CIGARROS - KING SPORT | 0.39 | | | |
| | | | 1301114 | CIGARROS - LIFE | 0.39 | | | |
| | | | | | | 1301151 | CIGARROS - ASSEMBLY | 0.46 |
| 2101111 | TECIDO PARA CALÇAS | 0.130 | 2101111 | TECIDO PARA CALÇAS | 0.20 | 2101111 | TECIDO PARA CALÇAS | 0.24 |
| 2101121 | TECIDO PARA VESTIDO | 0.150 | 2101121 | TECIDO PARA VESTIDO | 0.20 | 2101121 | TECIDO PARA VESTIDO | 0.24 |
| 2101131 | SERVICOS DE ALFATARIA | 0.070 | 2101131 | SERVICOS DE ALFATARIA | 0.05 | 2101131 | SERVICOS DE ALFATARIA | 0.21 |
| 2102111 | BALALAICA | 0.060 | | | | | | |
| 2102121 | CALÇAS | 0.120 | 2102121 | CALÇAS | 0.03 | 2102121 | CALÇAS | 0.16 |
| 2102131 | CAMISA | 0.090 | 2102131 | CAMISA | 0.26 | 2102131 | CAMISA | 0.84 |
| 2102141 | PEUGA | 0.010 | 2102141 | PEUGA | 0.02 | 2102141 | PEUGAS | 0.05 |
| 2102161 | SLIPS | 0.010 | 2102161 | CUECAS | 0.01 | 2102161 | CUECAS | 0.01 |
| 2102181 | FATO PARA HOMEM | 0.070 | 2102181 | FATO PARA HOMEM | 0.08 | | | |
| 2102191 | JACKET | 0.260 | 2102191 | JACKET | 0.01 | | | |
| 2103211 | SAIA | 0.030 | 2103211 | SAIA | 0.23 | 2103211 | SAIA | 0.16 |
| 2103221 | VESTIDO | 0.780 | 2103221 | VESTIDO | 0.17 | 2103221 | VESTIDO | 0.15 |
| 2103241 | CAPULANA | 0.170 | 2103241 | CAPULANA | 0.79 | 2103241 | CAPULANA | 2.92 |
| 2103251 | SOUTIEN | 0.050 | 2103251 | SOUTIEM | 0.02 | 2103251 | SOUTIEM | 0.07 |
| 2103261 | BLUSA | 0.150 | 2103261 | BLUSA | 0.19 | 2103261 | BLUSA | 0.21 |
| 2103271 | CUECA PARA SENHORAS | 0.010 | 2103271 | CUECAS PARA SENHORAS | 0.02 | 2103271 | CUECAS PARA SENHORAS | 0.07 |
| 2103291 | LENCO DE CABECA | 0.070 | 2103291 | LENÇO PARA CABEÇA | 0.07 | 2103291 | LENÇO PARA CABEÇA | 0.13 |
| 2104111 | CAMISA PARA CRIANCA | 1.050 | 2104111 | CAMISA PARA CRIANÇA | 0.30 | 2104111 | CAMISA PARA CRIANÇA | 1.35 |
| 2201111 | SAPATOS DE CABEDAL | 0.070 | 2201111 | SAPATOS DE CABEDAL | 0.30 | 2201111 | SAPATO DE CABEDAL | 0.33 |
| 2201121 | SAPATO DE CAMURÇA | 0.130 | 2201121 | SAPATO DE CAMURÇA | 0.30 | 2201121 | SAPATO DE CAMURÇA | 0.33 |
| 2202111 | SANDALIAS PLASTICAS | 0.020 | | | | 2202111 | SANDALIAS PLASTICAS | 0.07 |

| Maputo | | | Beira | | | Nampula | | |
|---|---|---|---|---|---|---|---|---|
| Item code | Item | Weight | Item code | Item | Weight | Item code | Item | Weight |
| 2202121 | SAPATO DE CABEDAL SALTO ALTO | 0.120 | 2202121 | SAPATO DE CABEDAL SALTO ALTO | 0.46 | 2202121 | SAPATO DE CABEDAL SALTO ALTO | 0.31 |
| 2203111 | CALCADO PARA CRIANCA | 1.070 | 2203111 | CALÇADO PARA CRIANÇA | 0.24 | 2203111 | CALÇADO PARA CRIANÇA | 0.64 |
| 2204111 | MEIA SOLA PARA SAPATO | 0.030 | 2204111 | MEIA SOLA PARA SAPATO | 0.01 | 2204111 | MEIA SOLA PARA SAPATO | 0.10 |
| 3101111 | RENDA DE CASA | 0.750 | 3101111 | RENDA DE CASA | 2.01 | 3101111 | RENDA DE CASA | 0.35 |
| 3102111 | AGUA | 0.750 | 3102111 | AGUA | 1.23 | 3102111 | AGUA | 0.57 |
| 3102211 | TINTAS | 0.190 | 3102211 | TINTAS | 0.02 | 3102211 | TINTAS | 0.11 |
| 3102212 | TORNEIRA | 0.190 | 3102212 | TORNEIRA | 0.02 | 3102212 | TORNEIRA | 0.11 |
| 3203111 | GAS | 0.450 | 3203111 | GAS | 0.26 | | | |
| 3203121 | PETROLEO | 0.800 | 3203121 | PETROLEO | 0.52 | 3203121 | PETROLEO | 1.27 |
| 3204111 | CARVAO | 1.470 | 3204111 | CARVAO | 1.48 | 3204111 | CARVAO | 0.27 |
| 3204121 | LENHA | 1.280 | 3204121 | LENHA | 0.18 | 3204121 | LENHA | 0.84 |
| 3205111 | ELECTRICIDADE | 2.310 | 3205111 | ELECTRICIDADE | 1.63 | 3205111 | ELECTRICIDADE | 0.90 |
| 3301111 | CAMA DE CASAL | 0.220 | 3301111 | CAMA DE CASAL | 0.10 | 3301111 | CAMA DE CASAL | 0.02 |
| 3301121 | MESA DE COZINHA C/4 CADEIRAS | 0.280 | 3301121 | MESA DE COZINHA | 0.18 | 3301121 | MESA DE COZINHA | 0.03 |
| 3301131 | MOBILIA DA SALA DE VISITAS | 0.150 | 3301131 | SALA DE VISITA | 0.14 | 3301131 | SALA DE VISITA | 0.02 |
| 3401111 | LENCOIS | 0.030 | 3401111 | LENCOIS | 0.19 | 3401111 | LENCOIS | 0.21 |
| 3501121 | FOGAO | 0.090 | 3501121 | FOGAO | 0.02 | 3501121 | FOGAO | 0.21 |
| 3501122 | GELEIRA | 0.080 | 3501122 | GELEIRA | 0.19 | 3501122 | GELEIRA | 0.19 |
| 3601111 | PRATO | 0.040 | 3601111 | PRATO | 0.10 | 3601111 | PRATO | 0.10 |
| 3601121 | COPO | 0.020 | 3601121 | COPO | 0.04 | 3601121 | COPO | 0.04 |
| 3602111 | TALHERES | 0.140 | 3602111 | TALHERES | 0.06 | 3602111 | TALHERES | 0.06 |
| 3701111 | DETERGENTE LIQUIDO PARA LOUCA | 0.010 | | | | | | |
| 3701121 | DETERGENTE EM PO | 0.010 | | | | | | |
| 3701131 | SABAO | 0.010 | 3701131 | SABAO BINGO | 0.02 | 3701131 | SABAO MONAPO | 0.02 |
| 3701141 | VASSOURA | 0.030 | 3701141 | VASSOURA | 0.06 | 3701141 | VASSOURA | 0.06 |
| 3701151 | FOSFOROS (10 CAIXAS) | 0.010 | 3701151 | FOSFOROS | 0.02 | 3701151 | FOSFOROS | 0.02 |
| 3901111 | PAGAMENTO DE EMPREGADOS | 0.570 | 3901111 | PAGAMENTO DE EMPREGADOS | 0.56 | 3901111 | PAGAMENTO DE EMPREGADOS | 0.38 |
| 4101111 | ANTIBIOTICO | 0.250 | 4101111 | ANTIBIOTICO | 0.23 | 4101111 | ANTIBIOTICO | 0.29 |
| 4101121 | REMEDIO P/ APAR. RESPIRATORIO | 0.020 | 4101121 | REMEDIO P/ APAR. RESPIRAT | 0.11 | 4101121 | REMEDIO P/ APAR. RESPIRAT | 0.14 |
| 4101131 | SORO DE REHIDRATACAO ORAL | 0.120 | 4101131 | SORO DE REHIDRATACAO ORAL | 0.08 | 4101131 | SORO DE REHIDRATACAO ORAL | 0.10 |
| 4101141 | REMEDIO ANTI-TUBERCULOTICO | 0.050 | 4101141 | REMEDIO ANTI-TUBERCULOTIC | 0.08 | 4101141 | REMEDIO ANTI-TUBERCULOTIC | 0.10 |
| 4101151 | REMEDIO ANTI-PARASITARIO | 0.100 | 4101151 | REMEDIO ANTI-MALARIA | 0.08 | 4101151 | REMEDIO ANTI-MALARIA | 0.10 |
| 4101161 | REMEDIO PARA DERMATOLOGIA | 0.200 | 4101161 | REMEDIO PARA DERMATOLOGIA | 0.03 | 4101161 | REMEDIO PARA | 0.04 |

| Item code | Maputo — Item | Weight | Item code | Beira — Item | Weight | Item code | Nampula — Item | Weight |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | DERMATOLOGIA | |
| 4101171 | REMEDIO DEURETICO | 0.010 | 4101171 | REMEDIO DEURETICO | 0.02 | 4101171 | REMEDIO DEURETICO | 0.02 |
| 4201111 | HOSPITAL. TAXA DE INTERNAMENTO | 0.080 | 4201111 | TAXA DE INTERNAMENTO | 0.09 | 4201111 | TAXA DE INTERNAMENTO | 0.18 |
| 4301111 | CONSULTA MEDICA | 0.030 | 4301111 | CONSULTA MEDICA | 0.09 | 4301111 | CONSULTA MEDICA | 0.14 |
| 5101111 | BICICLETA | 0.170 | 5101111 | BICICLETA | 0.07 | 5101111 | BICICLETA | 0.06 |
| 5201111 | GASOLINA | 0.310 | 5201111 | GASOLINA | 0.07 | 5201111 | GASOLINA | 0.17 |
| 5301111 | BILHETE - TPM | 0.620 | 5301111 | BILHETE - TPB | 0.27 | | | |
| 5301121 | CHAPA | 0.300 | 5301121 | CHAPA | 0.21 | 5301121 | CHAPA NAMPULA - ANCHILO | 1.71 |
| 5301211 | EXPRESSO TPM /MAPUTO - MATOLA | 0.450 | 5301211 | EXPRESSO TPB /BEIRA - INHAMIZU | 0.10 | | | |
| 5401111 | SELOS POSTAIS | 0.010 | 5401111 | SELOS POSTAIS | 0.01 | 5401111 | SELOS POSTAIS | 0.02 |
| 5402111 | TELEFONE | 0.510 | 5402111 | TELEFONE | 0.51 | 5402111 | TELEFONE | 0.07 |
| 6101111 | RADIO/GRAVADOR | 0.240 | 6101111 | RADIO GRAVADOR | 0.38 | 6101111 | RADIO/GRAVADOR | 0.32 |
| 6101121 | TV | 0.200 | 6101121 | TV | 0.31 | 6101121 | TV | 0.26 |
| 6102111 | CASSETES | 0.060 | 6102111 | CASSETES | 0.09 | 6102111 | CASSETES | 0.08 |
| 6102121 | ROLO PARA FOTOGRAFIAS | 0.030 | 6102121 | ROLO PARA FOTOGRAFIAS | 0.01 | 6102121 | ROLO PARA FOTOGRAFIAS | 0.06 |
| 6201111 | FUTEBOL | 0.110 | 6201111 | FUTEBOL | 0.03 | 6201111 | FUTEBOL | 0.10 |
| 6201112 | CINEMA | 0.020 | 6201112 | CINEMA | 0.02 | 6201112 | CINEMA | 0.06 |
| 6201113 | TEATRO | 0.030 | | | | | | |
| 6302111 | JORNAL NOTICIAS | 0.140 | | | | 6302111 | JORNAL NOTICIAS | 0.02 |
| 6302112 | REVISTA TEMPO | 0.050 | 6302112 | REVISTA TEMPO | 0.01 | | | |
| 6302113 | JORNAL DOMINGO | 0.060 | 6302113 | JORNAL DOMINGO | 0.01 | | | |
| | | | 6302115 | JORNAL DIARIO | 0.01 | 6302114 | JORNAL SAVANA | 0.02 |
| 6401111 | PROPINAS ESCOLARES | 0.110 | 6401111 | PROPINAS ESCOLARES | 0.66 | 6401111 | PROPINAS ESCOLARES | 0.34 |
| 6401121 | CADERNO ESCOLAR | 0.160 | 6401121 | CADERNO ESCOLAR | 0.26 | 6401121 | CADERNO ESCOLAR | 0.13 |
| 6401131 | LIVRO DE MATEMATICA DA 6a. CLASSE | 0.190 | 6401131 | LIVRO DE MATEMATICA 6ª CLASSE | 0.13 | 6401131 | LIVRO DE MATEMATICA 6ª CLASSE | 0.13 |
| 6401141 | LAPIS DE CARVAO | 0.170 | 6401141 | LAPIS | 0.13 | 6401141 | LAPIS | 0.13 |
| 6401151 | ESFEROGRAFICAS | 0.170 | 6401151 | ESFEROGRAFICAS | 0.13 | 6401151 | ESFEROGRAFICAS | 0.13 |
| 6501111 | TOTOBOLA | 0.010 | | | | | | |
| 7101131 | SERVICO DE BARBEIRO | 0.080 | 7101131 | SERVIÇO DE BARBEIRO | 0.02 | 7101131 | SERVIÇO DE BARBEIRO | 0.01 |
| 7101141 | SERVICO DE CABELEREIRO | 0.560 | 7101141 | SERVIÇO DE CABELEREIRO | 0.08 | 7101141 | SERVIÇO DE CABELEREIRO | 0.06 |
| 7102111 | SABONETE | 1.460 | 7102111 | SABONETE | 1.37 | 7102111 | SABONETE | 0.75 |
| 7102121 | PAPEL HIGIENICO | 0.680 | 7102121 | PAPEL HIGIENICO | 1.37 | 7102121 | PAPEL HIGIENICO | 0.75 |
| 7102151 | PASTA DENTIFRICA | 0.390 | 7102151 | PASTA DENTIFRICA | 0.40 | 7102151 | PASTA DENTIFRICA | 0.22 |
| 7201111 | REFEICAO EM RESTAURANTE | 0.060 | 7201111 | REFEIÇAO EM RESTAURANTE | 0.10 | 7201111 | REFEIÇAO EM RESTAURANTE | 0.16 |
| 7201211 | BOLO DE ARROZ | 0.030 | 7201211 | BOLO DE ARROZ | 0.04 | 7201211 | BOLO DE ARROZ | 0.01 |
| 7201221 | SANDUICH DE OVO | 0.020 | 7201221 | SANDUICHE DE OVO | 0.04 | 7201221 | SANDUICHE DE OVO | 0.01 |

| Maputo | | | | Beira | | | | Nampula | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Item code | Item | Weight | | Item code | Item | Weight | | Item code | Item | Weight |
| 7202111 | CHA (FORA DE CASA) | 0.040 | | . | . | . | | . | . | . |
| 7202211 | REFRESCO EM LATA (F/DE CASA) | 0.760 | | 7202211 | REFRESCO EM LATA | 0.03 | | 7202211 | REFRESCO EM LATA | 0.15 |
| 7202311 | CERVEJA (FORA DE CASA) | 0.750 | | 7202311 | CERVEJA EM LATA | 0.03 | | 7202311 | CERVEJA EM LATA | 0.15 |
| . | . | | | . | . | | | 7202112 | GALAO | 0.01 |
| SUM | | 100.000 | | | | 100.000 | | | | 100.000 |

a . means the prodoct is not in the basket of the city.

# People who contributed to our study and proposals

| Name | Employer | Telephone/e-mail | Profession/title | Misc |
|------|----------|------------------|------------------|------|
| Leif Korbøl | Instituto Nacional Estatistica (Statistics Norway) | 417234 korbol@virconn.com | Statistical advisor, economic statistics | long term consultant, two years from mars 98 |
| Leif Norman | Instituto Nacional Estatistica (Statistics Sweeden) | 418805 leifnor@virconn.com | Team leader, strategic advisor | long term |
| Bo Yttergren | Instituto Nacional Estatistica | 491486 boy@virconn.com | Consultant on information technologies | long term |
| Gunvor Iversen | Instituto Nacional Estatistica (Statistics Norway ) | 417601 gunvor@virconn.com | Statistical advisor, demographic statistics | long term |
| Dr. Loureiro | Instituto Nacional Estatistica | | President | |
| Dr. Valeriano Levente | Instituto Nacional Estatistica | | Economist, Vice President, Head of Economic Statistics | |
| Dr. Amelia Taime Muendane | Instituto Nacional Estatistica | | Economist, Director of Department of National Accounts and Short Term Indicators | |
| Dr. Firmino Alberto Guiliche | Instituto Nacional Estatistica | | Statistician, Head of Price statistics and Short Term Indicators | |
| Dr. Alberto Namahala | Instituto Nacional Estatistica, Nampula | | Director of the Province Delegation | Previous cheif of Consumer Price Index, Maputo |
| Dr. Bete Carneirho | Instituto Nacional Estatistica, Beira | | Director of the Province Delegation | |
| Maria Eugema Pires | National Directorate of Planning and Budget, Ministry of Planning and Finance | | Macroeconomist | Qualified user of the cpi |
| Rogerio Nkoomo | International Monetary Fund, Maputo | | Economist | Cpi user |
| Antonio Luciano Jossefa | Banco de Mocamique | 42 94 97 | Economist | Cpi user |

| Name | Employer | Telephone/e-mail | Profession/title | Misc |
|---|---|---|---|---|
| Fedusio Wazela | Banco de Mocamique | 41 94 97 | Economist | Cpi user |
| Antonio Latzo | Instituto Nacional Estatistica (UNDP) | | Consultant, national accounts | From Peru |
| Felieidade Pines | Instituto Nacional Estatistica | | National accounts | |
| Simon C. Bell | The World Bank, Maputo | 492841 | Senior Finacial Economist | |
| Gunnar Bø | Royal Norwegian Embassy | 42 94 11 | Ministerråd | Head of local NORAD |
| Rasmus Bakke | Royal Norwegian Embassy | 42 94 11/12/13 | First secretary | Norad, econmic analysis |
| Mette Masst | Royal Norwegian Embassy | 42 94 11 | First secretary | Norad |
| Socrates | Instituto Nacional Estatistica, Maputo | | IT-specialist, Clipper | |
| Bento | Instituto Nacional Estatistica , Nampula | | Head of Economic Statistics | |
| Flavia Mario Monjanc | Instituto Nacional Estatistica | | Price revisor, Maputo | |
| Fernando | Instituto Nacional Estatistica, Beira | | Supervisor of the price collectors | Worked at INE, Maputo previously |
| Mats Alentun | Tribunal de Contas da Suecia, riksrevisjonen? | 302210 (w) 497897 (p) | MBA, economist | Living in Maputo, worked two years at INE, Beira |

# The forms used for collecting prices

| DIRECÇÃO NACIONAL DE ESTATISTICA | ESTAB. _Mime. Belmensea_ | | COD.CIDADE _03_ |
| INDICE DE PREÇOS NO CONSUMIDOR | ENDERENÇO _____ | | COD.EST._2020_ ING _03_ |
| CIDADE _Nampula_ 1997 | BAIRRO _____ | | CIRC. N _01_ |

| CODIGO | | | _110411_ | _01_ | _110943_1 | _02_ | _111024_1 | _03_ | _120119_1 | _04_ | _120117_2_ | _05_ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOME DO PROD. MARCA TAMANHO CARACTERIST. UNIDADE | | | Pão 250 g Un | | Bolacha Maria 200 g Pacote | | Rebucados hortî'p Un | | Refresco em garrafa 300 ml L | | Refresco/Lat fanta 340 ml L | |
| MÊS | | DT | CI | | | | | | | | | | |
| JAN | 01 | 27 | 01 | 1000,00 | S | 8000,00 | S | 250,00 | S | 23310,00 | S | 29.400,00 | E |
| FEV | 02 | 28 | 01 | 1000,00 | C | 8000,00 | E | 250,00 | A | 23310,00 | C | 29.400,00 | E |
| MAR | 03 | 27 | 01 | 1000,00 | E | 7500,00 | E | 250,00 | E | 19.980,00 | E | 22.200,00 | E |
| ABR | 04 | 28 | 01 | 1000,00 | E | 7500,00 | E | 250,00 | A | 19.980,00 | E | 22.200,00 | E |
| MAI | 05 | 27 | 01 | 1000,00 | J | 7500,00 | E | 250,00 | A | 19.980,00 | E | 23.500,00 | E |
| JUN | 06 | | | | | | | | | | | | |
| JUL | 07 | | | | | | | | | | | | |
| AUG | 08 | | | | | | | | | | | | |
| SET | 09 | | | | | | | | | | | | |
| OUT | 10 | | | | | | | | | | | | |
| NOV | 11 | | | | | | | | | | | | |
| DEZ | 12 | | | | | | | | | | | | |
| MUDANÇA | | | | | | | | | | | | | |

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| DIRECÇÃO NACIONAL DE ESTATÍSTICA | | ANO 19 __ | |
| INDICE DE PREÇOS NO CONSUMIDOR | | MÊS ____ | |
| CIDADE _____ | | | |
| MERCADO _____ de ____ | | SEMANA 04 | |
| | | INQ. | |

| NOME DO PRODUTO | CÓDIGO | PREÇO | PESO |
|---|---|---|---|
| **CEREAIS E PRODUTOS A BASE DE CEREAIS** | | | |
| ARROZ CORRENTE | 1101111 | | |
| ARROZ EXTRA | 1101112 | | |
| MILHO AMARELO | 1101121 | | |
| MILHO BRANCO | 1101122 | | |
| FARINHA/MILHO AMAR. | 1101211 | | |
| FARINHA/MILHO BRAN. | 1101212 | | |
| FARINHA/TRIGO NORM. | 1101221 | | |
| FARINHA/TRIGO ESPE. | 1101222 | | |
| ESPARGUETE | 1101311 | | |
| MACARRAO | 1101321 | | |
| **AVES E CARNE PROCESSADA** | | | |
| FRANGO VIVO | 1102111 | | |
| FRANGO MORTO LIMPO | 1102222 | | |
| PATO VIVO | 1102231 | | |
| SALSICHA EM LATA | 1102321 | | |
| **PEIXES, CRUSTACEOS E MOLUSCOS FRESCOS E SECOS** | | | |
| PEIXE FRES. 1a PEDR | 1103111 | | |
| PEIXE FRES. 2a CORV | 1103121 | | |
| PEIXE CONG. 2a CARA | 1103131 | | |
| PEIXE SERRA | 1103141 | | |
| LULAS FRESCAS | 1103211 | | |
| CAMARAO MEDIO FRES. | 1103231 | | |
| CARANGUEIJO MEDIO | 1103241 | | |
| AMEIJOA | 1103251 | | |
| CAMARAO SECO | 1103261 | | |
| **LEITE, PRODUTOS LACTEOS E OVOS** | | | |
| LEITE FRESCO | 1104111 | | |
| LEITE COND. PROTAL | 1104131 | | |
| QUEIJO BELA ROSA | 1104211 | | |
| OVOS DE GALINHA | 1104311 | | |
| **ÓLEOS E GORDURAS** | | | |
| ÓLEO ALIMENTAR | 1105111 | | |
| MARGARINA FLOR | 1105121 | | |
| | | | |
| | | | |

| NOME DO PRODUTO | CÓDIGO | PREÇO | PESO |
|---|---|---|---|
| **FECULAS AMIDOS E LEGUMES FRESCOS** | | | |
| ALFACE | 1106111 | | |
| CEBOLA | 1106121 | | |
| CENOURA | 1106131 | | |
| COUVE | 1106141 | | |
| REPOLHO | 1106151 | | |
| TOMATE | 1106161 | | |
| **FRUTAS FRESCAS** | | | |
| LARANJA | 1107111 | | |
| LIMAO | 1107121 | | |
| TANGERINA | 1107131 | | |
| ANANAS | 1107211 | | |
| BANANA | 1107221 | | |
| COCO | 1107231 | | |
| MANGA | 1107241 | | |
| PAPAIA | 1107251 | | |
| **LEGUMINOSAS, TUBERCULOS E FARINHA DE TUBERCULOS** | | | |
| FEIJAO MANTEIGA | 1108111 | | |
| AMENDOIM | 1108121 | | |
| AMENDOA DE CAJU | 1108131 | | |
| BATATA | 1109111 | | |
| BATATA-DOCE | 1109121 | | |
| MANDIOCA | 1109131 | | |
| FARINHA DE MANDIOCA | 1109211 | | |
| **AÇUCAR, BEBIDAS NAO ALCOLICAS** | | | |
| ACUCAR AMARELO | 1110111 | | |
| ACUCAR BRANCO | 1110112 | | |
| CHA PROLAR | 1111111 | | |
| CAFE RICOFFY | 1111121 | | |
| **TEMPEROS, ESPECIARIAS E CONDIMENTOS** | | | |
| SAL GROSSO | 1112111 | | |
| VINAGRE | 1112121 | | |
| ALHO | 1112131 | | |
| PIRI PIRI FRESCO | 1112151 | | |
| PO DE CARIL | 1112161 | | |
| CALDO DE GALINHA | 1112171 | | |
| **COMBUSTIVEIS LENHOSOS** | | | |
| CARVAO | 3204111 | | |
| LENHA | 3204121 | | |

FORMAT A4 IPCM1

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DESCRIÇÃO DE PRODUTOS

CEREAIS E PRODUTOS A BASE DE CEREAIS

ARROZ CORRENTE - EMBALAGEM DE 1 KG OU LATA DE 900 GR

MILHO BRANCO - LATA DE 900 GR

FARINHA DE MILHO AMARELA - LATA DE 600 GR

FARINHA DE MILHO BRANCA - PACOTE DE 1 KG
                          MARCA - LIGUGU OU IMPALA

FARINHA DE TRIGO NORMAL - LATA DE 500 GR

FARINHA DE TRIGO ESPECIAL - PACOTE DE 1 KG
                           MARCA - SUNFLOWER

ESPARGUETE - PACOTE DE 500 GR
             MARCA - POLANA OU CERES

MACARRÃO - PACOTE DE 500 GR
           MARCA - POLANA OU CERES


CARNE PROCESSADA

SALSICHA EM LATA - LATA DE 275 GR
                   MARCA - BULL BRAND OU KOO


LEITE E PRODUTOS LACTEOS

LEITE FRESCO - PACOTE DE 1 LT
               MARCA - ULTRAMEL

LEITE CONDENSADO - LATA DE 397 GR
                   MARCA - PROTAL

QUEIJO - BARRA DE 500 GR
         MARCA - BELA ROSA


OLEO E GORDURAS

OLEO ALIMENTAR - OLEO VEGETAL
                 GARRAFA DE 750 CL

MARGARINA - EMBALAGEM DE 500 GR
            MARCA - FLOR

LEGUMINOSAS, TUBERCULOS E FARINHA DE TUBERCULOS

FEIJÃO MANTEIGA - EMBALAGEM DE 1 KG OU LATA DE 900 GR

AMENDOA DE CAJU - LATA DE 500 GR

FARINHA DE MANDIOCA - LATA DE 250 GR

BEBIDAS NÃO ALCOLICAS

CHÁ - PACOTE DE 80 GR
      MARCA - PROLAR

CAFÉ - LATA DE 100 GR
       MARCA - RICOFFY


TEMPEROS, ESPECIARIAS E CONDIMENTOS

SAL GROSSO - EMBALAGEM DE 1 KG OU LATA DE 900 GR

VINAGRE - GARRAFA DE 500 CL

PÓ DE CARIL - PACOTE DE 50 GR
              MARCA - RAJAH

CALDO DE GALINHA - PACOTE DE 17 GR
                   MARCA - MAGGI

CALDO DE VACA - PACOTE DE 18 GR
                MARCA - MAGGI

# Recent publications in the series Documents

**Documents**

**B**

**Statistisk sentralbyrå**
Statistics Norway