"Seminar on developing a Programme for the Implementation of the 2008 SNA and Supporting Statistics in the CARICOM Region"
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<u>**Country report**</u>: **SURINAME**

(Based mainly on National Accounts, Selected Macro Economic Aggregates 2006-2010, Sources and Methods, March 2012)

Main policy issues
The GBS is Responsible for collecting, processing, and disseminating National Accounts (NA), Nationally and Internationally.

The Foundation General Bureau of Statistics is governed by Law SB.2002, no 97, Statistics Act December 2002, which defines the legal status of the GBS, the mission, the statistical secrecy requirements, and the mandatory provision of information by respondents, inter alia:
"Article 1, 2 and 3 of the Statistics Act".

Law SB.2002, no 97, establishes the statistical secrecy rule as well as the obligation to comply with said rule and use data solely for statistical purposes. This is disclosed both in the questionnaires and in the cover letters that accompany surveys.
GBS officials, who sign individual contracts when recruited, in which statistical secrecy is included, must comply with statistical secrecy requirements. Access to survey data is limited to personnel directly involved in this work and their superiors

Law SB.2002, no 97, Statistics Act December 2002, establishes the statistical secrecy rule as well as the penalties to be applied for noncompliance. Article 8 of the Statistic Law.

The implementation of new technologies is a continuous process in the day to day work of the National Accounts section and enable savings on any aspects of the work and increase the efficiency of staff. Coordinated efforts are being made with other public institutions, (Planning Office, Ministry of Finance and Central Bank of Suriname) in order to facilitate the national accounts compilation.

In view of the importance of quality management there is continuous monitoring.
As off 2008 the National Account section is assisted by CARTAC consultant M. Blokland.

The release calendar of all national accounts indicators is available at the GBS (Public Relation section) and is also put on the GBS website. There is also an e-mail address and phone number for users to voice their concerns or request information on NA.

The national accounts section regularly participates in statistical meetings and seminars organized by national, regional, international and other professional organizations.
Users' concerns are noted and addressed to the extent possible.

Scope

The national accounts cover the whole economy of the Republic of Suriname.

The revised system compiles estimates of GDP by production at current and at constant *2007* prices, and GDP by expenditure at current prices, following the concepts, definitions and classifications broadly consistent with *System of National Accounts, 1993 (1993 SNA)*. In addition macro-economic aggregates such as Gross National Income and Gross National Disposable Income are derived. The Establishments are classified according to the International Standard Industrial Classification *(ISIC)* Rev.3. The GBS does not compile institutional sector accounts, integrated economic accounts, Supply and Use Tables (SUT) and Quarterly national Accounts as yet, but there is a plan to commence most of those!

Classification

The Establishments are classified according to the International Standard Industrial Classification *(ISIC)* Rev.3.

Description of Economic Activity (according ISIC Rev. 3) for the National Accounts:

Private Sector

- Agriculture, Hunting and Forestry
- Fishery
- Mining and Quarrying
- Manufacturing
- Electricity, Gas and Water supply
- Construction
- Wholesale and Retail trade
- Hotels and Restaurants
- Transport, Storage and Communication,
- Financial Intermediation, Real Estate, Renting and Business activities,
- Education,
- Health and Social work,
- Other Community, Social and Personal services

Sector Government

- Agriculture, Hunting and Forestry
- Electricity, Gas and Water supply
- Construction
- Transport, Storage and Communication
- Public administration
- Education
- Health and social work

Basis of recording

Transactions are valued at market prices or the closest equivalent. Value Added (GVA) is recorded at basic prices, imports of goods are valued at cif (cost-insurance-freight) and exports

of goods at fob (free-on-board). GVA is calculated as the difference between output and intermediate consumption at current prices.
Market prices are used to value flows and stocks.

All transactions are in principle recorded on an accrual basis; government wages and salaries are on an accrual basis, while other government transactions are on a cash basis.
Recording period: Calendar year.

The grossing/netting procedures are in accordance and consistent with internationally accepted standards, guidelines, or good practices.

Data Sources
1. The main data source used in the compilation of annual GDP by industrial activity is the annual enterprise survey. This survey covers enterprises with 10 and more employees and includes information regarding turnover, intermediate consumption, compensation of employees, capital formation, changes in inventories and number of employees. The survey covers all industries except for Agriculture, Animal Husbandry, Forestry, and Fishing. The information for these industries is collected from respectively the Ministry of Agriculture, the Ministry of Natural Resources, the Department of Fisheries.
2. An Establishment Census (2007) was also conducted.
3. Since September 2009 the GBS conducted a survey for small enterprises (enterprises with less than 10 employees). The establishment survey for small enterprises collected data for the year 2007.
4. The GBS conducted a first intermediate cost structure survey. The purpose of this survey is to supplement the data on intermediate consumption of all industries and to compile the intermediate cost quadrant of the Supply and Use and Input Output tables. The survey was conducted in three major districts covering a 10 percent sample of enterprises stratified by industry. A comparison was made between the level of the intermediate consumption from the national accounts survey and that of the cost structure survey by industry. The main conclusion was that the coverage was very low, except for agriculture, and data were even missing for some industries.
5. Another data source is the quarterly enterprise survey. The GBS has conducted quarterly surveys from the 1970's. The survey includes data regarding turnover, compensation of employees, employment and output of manufacturing by product. Following recommendations of the consultant the questionnaire has been adapted to include intermediate costs in order to be able to calculate GVA by production. The first QGDP survey based on the revised questionnaire started in April 2009 collecting data for the first and second quarter of 2009.

The intermediate costs structure survey provided additional information related to the intermediate consumption by industry and product, mainly for agriculture.
Data related to the financial sector are provided by the Central Bank of Suriname (CBoS). The GBS sends the related questionnaires to the CBoS. In addition the CBoS provides the GBS with their annual reports.

The source for government related activities is the government budget as received from the Ministry of Finance.

Other sources used are:
- Ministry of agriculture: quantity and price data for selected agricultural products
- Customs; import and export of goods
- financial statements of selected enterprises
- Bauxite Institute; production and export of bauxite and alumina

Source data assessment

i. Accuracy of the data from surveys is routinely assessed.

ii. Accuracy of the information from administrative data and other supplementary sources to compile national accounts statistics is routinely assessed. If problems are identified, meetings are scheduled with respondents to resolve the issues.

Source data statistical techniques

i. Data compilation procedures are sound, and outliers are not replaced or modified unless clearly required.

ii. Appropriate measures are taken into account to validate the source data.

Other statistical procedures

Sound adjustments are employed to make source data consistent with national accounts requirements.

Two approaches for deriving the Suriname GDP are: the production approach and the expenditure approach. A description of the approaches is as follows:
- GDP using the production approach is derived as the sum of gross value added for each industry, at basic prices, plus taxes less subsidies on production and imports. Basic values represent the amounts received by producers, including the value of any subsidies on production, but before any taxes on products. The difference between the sum over all industries of gross value added at basic prices, and GDP at market prices, is the value of taxes less subsidies on production.
- GDP using the expenditure approach is derived as the sum of all final expenditures, changes in inventories and exports of goods and services less imports of goods and services.

The preparation of national accounts statistics in Suriname is undertaken by the GBS. The GDP (base year 2007=100) is broken down by sectors of economic activity in a clear manner; charts, tables and briefings are disseminated along with the data to facilitate analysis. Datasets are published with various levels of details: Agriculture, Hunting and Forestry, Fishery, Mining and Quarrying, Manufacturing, Electricity, Gas and Water supply, Construction, Wholesale and Retail trade, Hotels and Restaurants, Transport, Storage and Communication, Financial Intermediation, Real Estate, Renting and Business activities, Education, Health and Social work, Other Community, Social and Personal services and Government.

Data are published on GDP at constant and current prices following the same breakdown and covers the entire economy.

Data are also disseminated on GDP implicit deflator following the same breakdown.

The activity classifier is ISIC Rev. 3.

Data collection and processing timetables are adequate to meet timeliness and periodicity for disseminating the annual national accounts statistics.
That is, dissemination of national accounts statistics is always done in due time as previously scheduled at the GBS pre-announced release dissemination calendar.
The periodicity and timeliness of the data collection survey is adequate for the timely dissemination of the national accounts.

A. Specific Data sources and Compilation Procedures

A detailed review of the data sources and worksheets used for the compilation GDP by production in current and at constant prices was undertaken. The revision and rebasing of the national accounts is expected to bring major improvements in the current and constant price estimates, arising from broader coverage, conceptual and methodological changes, and improved estimation procedures.

The compilation procedures for calculating GVA at current and at constant prices were reviewed. GVA at current prices is calculated as a balancing item by subtracting intermediate consumption from output in basic prices. The calculation of intermediate consumption at purchaser's prices and the output in basis prices follows the guidelines of the *1993 SNA*. In the case of GVA at constant prices a distinction is made in best or most appropriate methods, second best methods and methods that should be avoided as described below.

It is acknowledged that double deflation method is the preferred method for calculating constant price estimates. In this method output and intermediate consumption are deflated separately by using an appropriate (Paasche type) price index. However, most countries do not have the required resources to apply this method. The second best method is to use the single extrapolation method by extrapolating output and intermediate consumption by the same volume indicator. This method assumes a constant ratio between intermediate consumption and output. Direct deflation of GVA should be avoided at all times since GVA does not have a corresponding price measure as a balancing item.

The single indicator/extrapolation method arrives at the same results as directly extrapolating GVA by an appropriate volume indicator. However, the consultant recommended to show the results for both output and intermediate consumption and calculating GVA as the balancing item in order to set up the production account.

For market output and output for own final use at constant prices, the best method would be to deflate the output at current prices by the respective PPIs or to extrapolate the base year output by an appropriate volume index, or to multiply the quantity in the current years by the base year producers price. Second best methods would be less appropriate PPIs, product specific CPIs and volume indices that are less representative. The use of indices related to the intermediate consumption should be avoided.

In the case of non-market output at constant prices, the preferred method would be deflation of the components of output namely compensation of employees, intermediate consumption and

consumption of fixed capital by their respective price indices or to extrapolate the output components in the base year by an appropriate volume index. Since the major part of non-market output consists of compensation of employees, an employment related volume index such as the number of employees or the hours worked may be used as alternative.

The best method for arriving at intermediate consumption at constant prices would be to have a breakdown of the intermediate cost components and to deflate each (homogenous) product separately. In addition a distinction should be made between imported and locally produced products. The imported products should be deflated by separately (preferably by an import price index) from the locally produced products. Deflation of intermediate consumption at an aggregated level should be avoided.

Deflators for intermediate consumption by product are generally not widely used and developed. This is also the case in Suriname. The second best method would be to use the same extrapolator as used for the output (single extrapolation, single indicator method). This method assumes a constant input output ratio for the different years.

In the case of Suriname, due to the lack of PPIs, XMPIs and input prices for the different activities, alternative methods such as single extrapolation have been applied. In this method output and intermediate consumption are extrapolated by the same volume indicator, which arrives at the same results as extrapolating GVA by a volume index. PPIs and XMPIs have to be developed and prices of inputs have to be investigated.

The following paragraph contains a description of the revised methodology related to the output and the intermediate consumption in current and at constant prices by industry for the years 2006-2010.

Agriculture, hunting and forestry
Introduction
Suriname produces a variety of agricultural products such as paddy, bananas, and vegetables, and animal husbandry. No data on hunting is currently included in the calculations. Most hunting activity is of an informal nature and is partly exported. The GBS has not been able to collect additional data, but the expert guesstimate is that the contribution of this activity is marginal compared to the other activities within this section.

The main data source for agricultural production is the Ministry of Agriculture, Animal husbandry and Fishery (MOA). The MOA collects data on physical quantities, and prices are obtained for a range of agricultural products such as rice, bananas, and vegetables. Financial data regarding turnover and intermediate consumption is not available.

Gross output at current prices is calculated by the quantity produced in the current years multiplied by the producer's price in those years. The intermediate consumption at current prices for the years 2007 and 2008 is based on the information from the intermediate costs structure survey. The intermediate consumption for the other years in which no information is available is assumed to be equal to the import of agricultural imports. These imports are derived from the trade data classified by end-use using the Broad Economic Categories (BEC) classification.

GVA at current prices is derived by subtracting the intermediate consumption at current prices from the output at current prices.

Gross output at constant 2007 prices is obtained by multiplying the current year produced quantities by the producer's price in the base year (revaluation). Intermediate consumption at constant prices is derived by extrapolating the base year intermediate consumption by the volume index of output (single indicator/single extrapolator method). The previous method (1990 base year), used the volume index of agriculture production as single extrapolator.

Suriname produces a variety of wood and wood products. The main data source for forestry activities is the Ministry of Natural Resources (MONR). The MONR has elaborate information regarding the quantities produced, and the purchaser's price of wood products. There is no information available regarding the costs of the inputs. In addition there is no data available from the enterprise survey. Given the aforementioned the following methodology has been applied.

Gross output at current prices is calculated as the quantity of wood felled multiplied by the export price of wood products due to lack of an appropriate producer's price. There is no information available about the trade margins to correct the export price to obtain producer prices, and no information about the intermediate consumption. It is assumed that the margins are about 10 percent and that intermediate consumption is about 25 percent of the output. GVA at current prices is derived by subtracting the intermediate consumption at current prices from the output at current prices. The assumptions of 10 and 25 percent have to be revisited and/or additional information has to be collected from the MONR.

Gross output at constant prices is calculated by multiplying the quantities in current year by the base year export price of wood and wood products. Intermediate consumption at constant prices is equal to the base year intermediate consumption extrapolated by the volume index of output. GVA at constant 1990 prices was derived by extrapolating the GVA in 1990 prices by the volume index of wood felled.

Fishing
The main products produced in the fishing industry are shrimp and fish. Shrimp is mainly exported while fish is mainly sold on the local market. The main data source currently used is the Department of Fishery (DOF).

Gross output at current prices is calculated by multiplying the production volume of fish and shrimp multiplied by the export price of the respective products adjusted for margins to arrive at producer's prices. Since no additional information could be obtained regarding the margins and the costs structures the following assumptions have been used. Margins are assumed to be equal to 10 percent of the output. Intermediate consumption at current prices is assumed to be equal to about 50 percent of the output. The consultant has recommended revisiting the assumption of 50 percent by using the information from the intermediate cost structure survey and/or collect additional information from the Department of Fishery.

Gross output at constant prices is calculated by multiplying the quantity of fish and shrimp as provided by the DOF in the current year by the adjusted export price in the base year. Base year

intermediate consumption is extrapolated by the volume indices of output in the respective years to arrive at intermediate consumption at constant prices.

Mining and quarrying

The mining and quarrying industry includes oil extraction, mining of bauxite, and mining of gold. The quarrying of stone and sand is marginal compared to the other activities. This industry is monopolistic in nature. All extraction and refining of oil and mining of bauxite are also undertaken by single companies. The mining of gold is undertaken by one major company and a lot of sole proprietor businesses. The major challenge in this industry is to make the distinction between the mining and manufacturing activities since the distinction is not relevant for the operation of the companies.

Oil extraction

The oil company regularly responds to the national accounts survey and in addition submits an annual report. There is also information available regarding the quantities produced and the price of crude oil. The information in both the national accounts survey and the annual report contain the combined information regarding the mining and manufacturing activities. The consultant recommended the following calculation of output and intermediate consumption.

The output of crude oil at current prices is calculated by multiplying the quantity crude oil produced by the corresponding producer's price. The changes in inventories are assumed to be negligible. The intermediate consumption attributed to the mining activity is derived from the annual report containing a breakdown of the costs. The overhead costs (operational expenditures) are both for the mining and manufacturing activities and are distributed according to the output of these activities. Output at current prices is deflated by the PPI of crude oil received from the oil company to arrive at output at constant prices as in the method previously used. Base year intermediate consumption is extrapolated by the volume index of oil produced.

Mining of bauxite

The main data source for the current price estimates is the annual enterprise survey. Additional information regarding quantities produced, is obtained from the quarterly production survey and from the Bauxite Institute. The output at current prices is calculated as sum of sales, own account capital formation and changes in inventories. The output at constant prices is calculated by extrapolating the base year output by the volume index of bauxite mined.

Mining of gold

The main data source for the current price estimates is the annual enterprise survey and data related to the activities of the small scale gold miners, provided by the CBoS. Output at constant prices is equal to the base year output extrapolated by the volume index of gold mined as in the previous methodology.

Manufacturing

Alumina production

Output and intermediate consumption at current prices are derived from the national accounts survey (NAS). In addition quantities produced are available from the quarterly production survey. The output at current prices is calculated as the sum of sales, own account capital formation and changes in inventories.

As in the previous (1990 base year) method output at constant prices is calculated by extrapolating the base year output by the volume index of the physical quantities of alumina produced. Intermediate consumption at constant prices is computed by extrapolating base year intermediate consumption by the volume index of output.

Gold processing
Another main activity within the manufacturing industry is related to the processing of gold. The same methodology as alumina manufacturing is applied in the sense that current price output and intermediate consumption are derived from the annual enterprise survey. Output is equal to the sales corrected for the changes in inventories.

As in the previous (1990 base year) method constant price output is arrived at by extrapolating the base year output by the physical quantities index of gold produced. These quantities are obtained from the quarterly production survey.

Processing of fish, shrimp, rice and wood
Output at current prices is calculated as the quantity of fish, shrimp, and rice and wood products multiplied by the purchaser's price adjusted for (a 10% assumed) trade margin to arrive at the producer's price of the respective products.

The calculation of intermediate consumption varies. The intermediate consumption related to the production of fish and shrimp is assumed to be equal to 0.71 as derived from the intermediate cost structure survey. Intermediate consumption of wood processing uses the input-output ratio from agriculture. Intermediate consumption of rice uses the input-output structure from one of the major rice companies.

For all these products output at constant prices is calculated by extrapolating the base year output by their corresponding physical quantity indices as derived from information from the Ministry of Agriculture, the Department of Fisheries and the Ministry of Natural resources. In the previous method GVA at constant prices was calculated by extrapolating the base year GVA by the volume index of exported fish, shrimp and wood.

Other manufacturing
This industry is minor and covers other manufacturing activities such as the manufacture of beverages, food products, textiles, wood and wood products, and furniture. The current price series are derived from the NAS. Base year output is extrapolated by the volume index of imported raw material of the respective products to arrive at output at constant prices. The intermediate consumption at constant prices uses the single extrapolation method. The same extrapolator was used in the previous method.

Electricity, gas and water supply
Electricity is supplied by three suppliers namely a semi-private electricity supplier (EBS), the private bauxite processing company (Suralco), and the government. The government mainly covers remoter parts of the country not covered by the semi-private supplier. There is no

production of gas but only sale of imported gas in canisters which is covered in the trade industry.

The main data source for the current price value is the NAS. The quantity and price information is available from the companies and/or from the quarterly production survey. The constant price methodology uses the single extrapolator method whereby the base year output and intermediate consumption are extrapolated by the quantity indices of electricity. These extrapolators are the same as the previous method.

The methodology differs in the case of the government supplier, a non-market producer, providing services free or at economically insignificant prices. Gross output at current prices is calculated as the sum of the production costs defined as compensation of employees, intermediate consumption and consumption of fixed capital. Intermediate consumption at current prices is calculated as the total value of materials purchased. Output at current prices is deflated by the wage rate index to arrive at output at constant prices. Previous method used the volume index of the number of employees as extrapolator.

Water is supplied by a semi-private water supplier (SWM) and the government. The government mainly covers remoter parts of the country not covered by SWM. The current price values are derived from the NAS. Output at constant prices is based on the volume index of cubic meters water produced. For the government; current price output is calculated as the sum of cost consisting of intermediate consumption and compensation of employees as derived from the budget. Intermediate consumption equals the value of materials purchased.

Construction

The main data source for the current price estimates is the NAS. However given the fact that this industry suffers from low response rates resulting in unrealistic results, it was decided to use the commodity flow approach in the estimations.

The output at current prices for the construction industry is calculated as the sum of the import of construction materials. The import data are adjusted for trade margins and import duties. The local production of construction materials mainly wood and wood products is added to the import of construction materials to arrive at the total output. The intermediate consumption is assumed to be around 16 percent of the output, based on the intermediate consumption output ratio from one of the major construction companies.

Output at current prices is deflated by a suitable price index to arrive at output at constant prices. The previous method used the volume index of locally produced and imported building materials as extrapolator.

Wholesale and retail trade

Gross output is equal to the trade margin as derived from the NAS. The value of base year output is extrapolated by a volume index of turnover to arrive at output at constant prices. The volume index of turnover is equal to the turnover at current prices deflated by the CPI for goods. Base year GVA in the previous method was extrapolated by the import price index in USD which is used as a volume proxy. The value of imports in USD was regarded as representing the volume

of import given the high fluctuations in the Surinamese guilder before the change to the Surinamese dollar.

The base year intermediate consumption is extrapolated by the volume index of output to arrive at a series of intermediate consumption at constant prices.

Hotels and restaurants

The current price values are derived from the NAS. The constant price output is calculated by extrapolating the base year output by the volume index of the number of tourists staying in hotels. Data from the Suriname Tourism Foundation show that about 30 percent of the total number of tourists overnight in hotels. The remainder of the tourists stays with friends and family. The consultant noted that the preferred extrapolator would be the number of stay over nights. However, this information was lacking at the time of the missions. The previous method used the average room occupancy as extrapolator.

Transport and communication

A distinction is made between land transport, air transport, supporting and auxiliary transport services, and post and telecommunication. Both the output and intermediate consumption at current prices are derived from the NAS except for the activities of the government operated buses and postal services. The information regarding government operated buses is derived from the budget. The calculation of output at constant prices differs by category as will be described in the following paragraphs.

Transportation

Land transport uses the purchaser's price index of tickets sold as deflator to arrive at output at constant prices, due to lack of an appropriate producer's price index. Transportation by air in the base year is extrapolated by the number of passengers transported, while the base year output of supporting transport is extrapolated by the quantity index of the number of employees to calculate the series of output at constant prices for other years.

The government provides transportation services at an economically insignificant price. As such the output is treated as non-market output and gross output is calculated as the sum of production costs consisting of compensation of employees, intermediate consumption and consumption of fixed capital. Intermediate consumption is equal to the value of materials purchased. Value of output of the base year is extrapolated by the volume index of the number of employees to arrive at output at constant price for the subsequent years.

Postal services

The office of postal services is government owned. The available information shows that the sales revenues are less than half of the operating costs. The postal services operate at huge losses which are compensated by transfers from the government. Given the aforementioned the output is calculated as the sum of cost. Intermediate consumption is equal to the value of materials purchased. Output at constant price is calculated by extrapolating the 2007 base year value by the volume index of the number of employees due to lack of better extrapolators.

Communication

Constant price output is derived by extrapolating the output by a volume index of the sales. The volume index of sales is derived by deflating the sales by the price index of communication services. The purchaser's price is adjusted by 10 percent to arrive at producer's prices. Volume indicators such as the number of minutes are only available for some years and not at all for the newer services such as mobile telephones and internet services.

Financial intermediation
This industry covers financial intermediation except insurance and pension funding (ISIC 65), insurance and pension funding except social security (ISIC 66), and activities auxiliary to financial intermediation (ISIC 67). The calculations differ by sub industry and have been adjusted to *1993 SNA* definitions.

The main data source is the Central Bank of Suriname (CBoS) which provides the necessary information to the GBS using questionnaires provided by the GBS. In addition the CBoS provides their annual report which contains consolidated profit and loss accounts from the commercial banks.

The output of financial intermediation except insurance and pension funding at current prices is calculated as the difference between the interest received and paid (FISIM, Financial Intermediation services Indirectly Measured) plus fees and commissions received. This sub industry includes the output of the Central Bank.

The output of life insurance companies at current prices is calculated as premiums earned plus premium supplements minus claims plus changes in actuarial reserves, while the output of non-life insurance is equal to premiums earned plus premium supplements minus claims. In the previous methodology output at current prices of insurance both life and non-life was calculated as the premiums minus claims and the output of included the interest received minus paid from the Central Bank

In addition activities auxiliary to financial intermediation of which information from the exchange offices (Cambio's) which *were previously not included* are now included in the estimates. The output of financial activities auxiliary to financial intermediation is equal to the fees and commissions earned.

Since direct deflation of FISIM is not possible the preferred method for arriving at the output at constant prices is used for financial intermediation except insurance and pension funding. This it to extrapolate base year output by a volume index of the deflated loans and deposits. CPI is used as a proxy deflator for the loans and deposits.

The preferred method for calculating the output of life insurance would be to first collect information on the aggregate value of life insurance policies (owed or in force), deflate this by the all-items CPI and calculate a volume index of the value of life insurance policies. This volume index can be used next to extrapolate base year output. Due to lack of data, the methodology used is to extrapolate the output by the index of gross premiums deflated by the all items CPI.

The constant price output of non-life insurance should preferably be calculated separately for property insurance, automobile insurance and all other insurance. Due to lack of data the second

best method is used by extrapolating the base year total output by the index of gross premiums deflated by the product specific CPI.

Real estate, renting and business activities
Current price values of output and intermediate consumption and as such GVA, are based on the NAS except for the imputed rental of owner occupied dwellings. The base year output is extrapolated by the volume index of the number of employees to calculate output at constant prices.

The imputed rental of owner occupied dwellings *is added to the estimates*. The output is calculated by multiplying the number of owner occupied houses by the average rental value. The number of owner occupied houses derived from the 2004 Census is extrapolated by the number of building permits to arrive at the number of owner occupied houses for the following years. The average rental value from the 2004 Census is extrapolated by CPI to arrive at the rental values for the following years. Intermediate consumption is assumed to be already included in the calculations of the remainder of the industry.

Private education, health and other services
Output for education, health and other services at current prices is based on the NAS. Current price output is deflated by the wage rate index to calculate the constant price estimates.

Public administration and defense, education, health and other service
Output for public administration and defense, education, health and other services, is calculated as the sum of costs. Intermediate consumption is equal to the value of materials purchased. Base year output is extrapolated by the volume index of the number of employees to calculate output at constant prices. Intermediate consumption in the base year is extrapolated by the respective volume indices of output.

Taxes less subsidies on products
The previous indirect taxes less subsidies as derived from the budget of the Ministry of Finance were analyzed and reclassified to taxes less subsidies on production using 1993 SNA definitions. Taxes less subsidies at constant prices are based on the values at current prices multiplied by the base year ratio of taxes less subsidies over GVA. There is a minor definitional difference.

**THE REVISION OF GROSS
DOMESTIC PRODUCT (GDP) BY EXPENDITURE APPROACH**

In response to a request from the General Bureau of Statistics of Suriname (GBS) a technical mission visited Suriname during July 9 - 20, 2012 and conducted a first national accounts mission to assist the authorities in revising their GDP by expenditure (EGDP) statistics. The mission consisted of Ms.Maureen Blokland and Ms Annette McKenzie. This activity was undertaken within the context of the following project: National accounts statistics STA_SUR_2007_07.

The GBS has recently finalized the revision of the GDP by production and its rebasing from the base year 1990 to 2007. This task has involved the revision of the GDP series for the period 2006 onwards. The authorities would now like to focus their efforts on improving the estimates of EGDP at current prices, particularly the Household Final Consumption Expenditure (HFCE), and on the development of EGDP at constant prices using the appropriate deflators.

EGDP at current prices
- Household Final Consumption Expenditure (HFCE) - the commodity flow method is recommended for the estimation of HFCE in current prices and for HFCE estimates to be compiled based on the Classification of Individual Consumption by Purpose (COICOP). The main data sources would be the production accounts data, external trade statistics on merchandise, balance of payment (BOP) data and the household budget survey (HBS).
- NPISH Final Consumption Expenditure (NPISHFCE): derive from the output compiled as the sum of costs using the national income survey data on NPISH.
- Government Final Consumption Expenditure (GFCE): derive from output of government adjusted for sales using the government budget estimates and ensure that the output and consumption calculations are consistent. Additional enquiries and data collection will be needed to ensure that the operation in respect of development aid and statutory bodies are included in GFCE. The mission also recommended that data on government social transfers to household be collected for inclusion in HFCE
- Gross Fixed Capital Formation (GFCF): use the commodity flow method using the imports of capital goods and construction material adjusted for import duties, freight and insurance, and trade and transport margins, and the local production of construction materials.
- Change in inventories: derive from changes in inventories by industry from the national accounts survey.
- Imports and exports of goods: use external trade statistics compiled by the GBS. The import data from Customs are registered c.i.f. while for national accounts purposes these have to be compiled on a f.o.b. basis. The Customs data contain separate information related to insurance and freight paid which can be used to make the CIFFOB adjustment. However, the information is not processed. The mission recommended processing the information to be used for the c.i.f.- f.o.b. adjustment.
- Imports and export of services: use the balance of payments (BOP) data which is compiled by the Central Bank of Suriname (CBoS). CBoS has revised the BOP starting with 2011. The mission recommended the CBoS to revise the BOP data back to 2007 to ensure consistency with the 2011 estimates and to facilitate the compilation of an EGDP series from 2007.

EGDP at constant prices
- HFCE to be derived by the deflation of HFCE at current prices by the commodity specific Consumer Price Index (CPI)
- NPISHFCE to be derived by the deflation of compensation of employees by the wage index and deflation of intermediate consumption less sales by the CPI.

- GFCE to be derived by the deflation of the components of GFCE – Compensation of employees by a wage index and intermediate consumption by product specific CPI.
- GFCF - the use of the import price index as deflator for machinery and equipment once these are available and the deflator used for the construction industry (building materials price index) for building and other structures. The building materials price index needs to be revised.
- Imports and exports of goods – to be derived by the deflating by the import and export price index of goods. The GBS started a project on XMPI compilation in 2008 with assistance from CARTAC. Some of the activities conducted included establishment of the sample of importers and exporters, calculation of weights for enterprise and commodities, identification of 2007 as base year, start of the data collection on export prices. The project was discontinued due to lack of the available resources at the GBS. The mission tried to continue analyzing the price data collected but this could not be done due to a computer crash. The mission recommended that work resume on the data collection and compilation of export import price indices (XMPIs). In addition no data collection has taken place yet with regard to the prices of imported products. GBS has agreed to resume this programme with data collection starting in the last quarter of 2012. The XMPI will serve as the deflator for the export and import of goods as well as for the machinery & equipment of gross fixed capital formation (GFCF).
- Imports and exports of services - the mission recommended the use of appropriate output related deflators or extrapolators for exports. Information on country of origin of imports is needed in order to determine an appropriate deflator and poses a problem if not available. CBoS has promised to look into this.

Requirements for the changeover to the 2008 SNA:

No.	Future Plans/ activities	Responsibility	Starting date	End date	Remarks
1	Assessment of National Account Section with regard to training/ staff needed - Implement and recommend specific training needs to ensure that the training requirements are in line with the Economic Statistics agendas (SNA2008) in the region. - Facilitating Attachments, Exchange Visits, etc, in this area so as to continuously build the capacity	GBS/ Consultant of CARTAC	2012 the 4th quarter	2013 1st quarter	
2	The formation of a Working Groups targeting key areas of urgent action to be taken and implement as necessary, a priority list of activities based on gaps found: a. the execution of an assessment on the current state of National Accounts, Short Term Economic Indicators and Investment Statistics b. Update document and sources of data that are important in producing the relevant statistics c. Maximize inter-agency collaboration d. Review National Account methodological approaches (frame works) to data compilation in the various areas as well as to be pursued and implemented based on the SNA 2008	GBS/ Consultant of CARTAC	2013	2015	The idea is that SNA2008 will be fully implemented in 2015

	e. Develop mechanisms through which the statistical systems in Suriname are continuously monitored and evaluated f. developed systems in addressing data collecting, compiling, and dissemination				
3	Establishment census	GBS	2014	2014	
4	Redesign of the questionnaires. Feedback from enterprises is essential for any redesign of the questionnaires. The GBS are strongly urged to seek enterprises views on the appropriateness of the existing survey questions to enable the final national accounts mission to redesign the questionnaires.	GBS/ Consultant of CARTAC	2014	2015	
5	All other actions deemed necessary to achieve the objectives such as: - International Trade in Services	GBS/ Consultant of CARTAC/ CBoS	2012	2015	