



# BHUTAN

## TECHNICAL ASSISTANCE REPORT—SARTTAC REPORT ON THE NATIONAL ACCOUNTS STATISTICS

March 2018

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*Building Macroeconomic Capacity in South Asia*



## **BHUTAN**

# **Report on National Accounts Statistics Technical Assistance Mission June 19–23, 2017**

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**August 2017**

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## Glossary

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>2008 SNA</i>	<i>System of National Accounts, 2008</i>
ADB	Asia Development Bank
BLSS	Bhutan Living Standards Survey
EC	Economic census
FISIM	Financial intermediation services indirectly measured
GDP	Gross domestic product
GVA	Gross value added
MLR	Minimum Lending Rate
NAPD	National Accounts and Price Division
NSB	National Statistics Bureau
PPI	Producer Price Index
QHCES	Quarterly Household Consumption Expenditure Survey
RMA	Royal Monetary Authority
STA	Statistics Department
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
XMPI	Export and Import Price Indices

## SUMMARY OF MISSION OUTCOMES AND PRIORITY RECOMMENDATIONS

**In response to a request from the National Statistics Bureau (NSB), a South Asia Regional Training and Technical Assistance Center (SARTTAC) national accounts statistics technical assistance (TA) mission visited Thimphu, Bhutan during June 19–23, 2017.** This mission was SARTTAC’s inaugural national accounts statistics TA mission to Bhutan; it followed a mission that was conducted by the IMF’s Statistics Department (STA) during May of 2016.

**The main purpose of the mission was to** assist the authorities in improving estimates of annual GDP, and in developing methods for compiling quarterly GDP estimates.

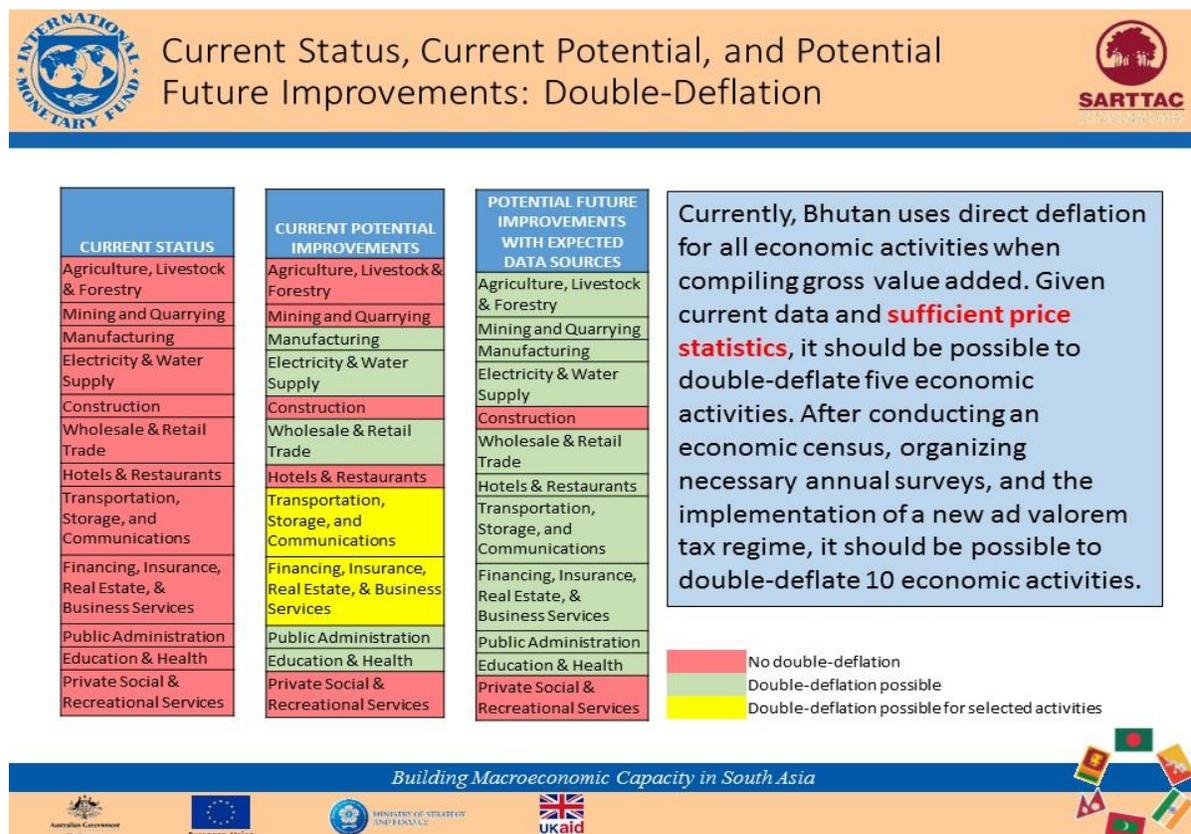
**The mission found that NSB is engaged in a range of projects to improve Bhutan’s national accounts statistics.** For example, results from a 2017 Bhutan Living Standards Survey were being tabulated; a new Quarterly Household Consumption Expenditure Survey (QHCES) was underway; plans were evolving to conduct the first economic census (EC) during the fall of 2017; and a price statistics improvement program is expected to begin in July 2017 and to produce results within one year. Source data from these data collection and improvement efforts will facilitate rebasing of the annual GDP estimates from 2000 to 2015 and developing quarterly GDP by expenditure.

**Updated annual GDP statistics signal an improvement in data quality, which should enhance policymakers’ ability to formulate and operationalize evidence-based decisions.** These decision-making processes are central to better management of the economy and, potentially, to faster, more balanced growth. The compilation of quarterly GDP statistics for the first time will also benefit economic policymakers—providing more timely information—and bring Bhutan more in alignment with international standards.

**Significant improvements to Bhutan’s national accounts statistics can be achieved using the following three-step process.** First, there is finalization, adoption, and implementation of Results Based Management (RBM) workplans that were developed during the mission for the compilation and dissemination of annual GDP and quarterly GDP statistics. Second, the authorities should perform early tests of EC and QHCES results to ensure their accuracy and reliability. Third, the authorities should accelerate their planned acquisition of new employees to perform the increased workload that is envisioned.

**The NSB should also keep in mind the need to incorporate methodological and conceptual/definitional revisions during the benchmarking and rebasing process.** For example, gross value added (GVA) in volume terms is derived using direct deflation methods and double deflation is not used. Sufficient source data are available currently to produce double-deflated GVA estimates for five economic activities. However, given anticipated new source data and price statistics, the NSB should be able to expand double-deflation to selected components of 10 economic activities during the upcoming benchmark. (Figure 1).

Figure 1. Double Deflation of Bhutan's Annual GDP Statistics



Sources: NSB and SARTTAC Mission.

Table 1. Priority Recommendations

Target Date	Priority Recommendation	Responsible Institutions
July 2017	Finalize, adopt, and begin implementing RBM workplans for annual GDP and quarterly GDP.	National Accounts and Price Division (NAPD)
Summer/Fall 2017	Test EC and QHCES results for accuracy and reliability.	NAPD and Survey Division
Summer 2017	Accelerate staff acquisition plan.	NSB Leadership

Further details on the priority recommendations and the related actions/milestones can be found under Detailed Technical Assistance to Bhutan.

# IMPROVING ANNUAL GDP AND DEVELOPING QUARTERLY GDP STATISTICS

## A. Ongoing and Upcoming Surveys

1. **Bhutan initiated a QHCES in early 2017, and plans to conduct an EC for the first time during the fall of 2017.** It is critical that the results of these data collection efforts be accurate and reliable. Therefore, the mission recommended that the NSB conduct early tests of the accuracy and reliability of the data being collected by the QHCES and of the EC. In the case of the QHCES, the mission recommended that the results of a subsample of respondents be validated by revisiting the respondents to confirm the already provided information. In the case of the EC, the mission recommended that the NSB pretest the form to ensure that it elicits the desired information accurately and reliably.
2. **While the EC may solve a source data problem for the new 2015 benchmark, selected annual surveys may be required to provide annual indicators going forward.** The latter requirements may be mitigated to the extent that an anticipated new ad valorem tax regime is designed to capture sufficient information to compute GVA in a double-deflation format.
3. **Bhutan plans to collaborate with Department of Revenue and Customs, the Asia Development Bank (ADB), and with other agencies of the Government of Bhutan to develop a Business Register as part of the EC effort.** Typically, a Business Register is a starting point for, not a product of, an EC data collection effort. Accordingly, the mission advised the authorities to give careful consideration to the development of the Business Register to ensure that the EC reflects appropriate coverage.

### **Recommendations:**

- The NSB should perform accuracy and reliability tests of the QHCES and EC as soon as possible so that adjustments can be incorporated into the data collection process to produce accurate and reliable results.
- The NSB should decide as soon as possible on the need for selected annual surveys to supplement EC data collection; design the related forms; and educate potential respondents concerning these new data collection requirements.
- The NSB should plan to evolve the Business Register and EC data collection in a manner that ensures comprehensive EC coverage. At the same time, a plan should be developed for updating the Business Register continuously—preferably by the Department of Revenue and Customs.

## B. Status of Recommendations of Previous TA Missions

### 4. **The NSB has made steady progress on implementing the recommendations of previous national accounts TA missions—the most recent of which was in May of 2016.**

(Appendix IV) Important “Complete” recommendations included: obtaining funds to conduct the 2017 Bhutan Living Standards Survey; developing plans to rebase Bhutan’s producer price index (PPI) and to develop export and import price indices (XMPI) using United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) resources; developing quarterly volume indicators for compiling quarterly GDP; and developing a commodity-flow approach for measuring annual GVA for construction.

**5. The NSB is “In progress” on two important recommendations.** First, the NSB is developing a plan to assist the Ministry of Agriculture and Forestry in preparing forecasts of crop output with assistance from the US Foreign Agriculture Service. Second, the NSB is developing a volume extrapolator for selected general government services because expenditure data are lumpy.

### 6. **Important “Incomplete” recommendations included: undertaking seasonal adjustment training; and developing high-quality business process documentation.**

#### **Recommendation:**

- The authorities should use the list of recommendations with status to track progress on important tasks.

## C. TA Provided

**7. The mission provided TA to improve annual and quarterly GDP estimates mainly for financial services indirectly measured (FISIM) and for insurance.** For FISIM, currently Bhutan follows the 1993 *System of National Accounts (1993 SNA)* standard for measuring output: property income earned less interest paid. The new 2008 SNA calls for measuring FISIM output using a reference rate approach. The mission recommended that the authorities use the “Base rate” (up to 2016) and the “Minimum Lending Rate” (beginning in 2016) established by the Royal Monetary Authority (RMA) as the reference rate for computing FISIM. In addition, the mission developed standardized EXCEL worksheets in a time series format for computing FISIM on deposits and Loans (SNA interest) that can be adapted for annual or quarterly compilations. (The EXCEL worksheets are available from the mission upon request.)

**8. The authorities were using 2008 SNA-like methods for compiling annual estimates of Insurance output based on data from company financial reports.** The process was complicated; however, because the two major insurance companies in Bhutan produce both insurance and financial services. One of the two insurance companies has issued annual reports since 2014 that reflect the combined results of insurance and financial services operations—with no easy method for disaggregating the report. The mission recommended that the authorities

contact the company to request a disaggregation of the report so that receipts and expenditures for insurance versus financial services can be identified separately. As a prototype for how the data should appear and the related compilation of insurance services output, intermediate consumption, and GVA, the mission used the financial report of the second major Bhutan insurance company (Appendix V).

**9. The mission also provided TA to the authorities in the form of comments on the QHCES and EC report forms.** Appendix VI reflects the comments made on the EC data collection form. Comments on the QHCES were marginal and were intended to make the data collection effort more comprehensive.

***Recommendations:***

- The authorities should obtain time series data from the RMA on deposits, loans, and their respective interest rates for financial institutions, and use this information to compile statistics on FISIM.
- The authorities should contact the relevant insurance company to obtain disaggregated data on insurance versus financial services accounts as soon as possible.
- The authorities should incorporate the mission's suggestions for improvements to the EC and QHCES data collection forms.

## **D. RBM Workplans**

**10. Planning is an important factor that will determine the success of efforts to rebenchmark and rebase Bhutan's annual GDP and compile quarterly GDP for the first time.** Accordingly, the mission assisted authorities in developing a workplan for completing this work. The workplan has three components: (1) an RBM workplan with overarching outcomes, indicators, baselines, and milestones (Appendix I); (2) a detailed schedule of events/activities that leads to the rebenchmarking and rebasing of annual GDP statistics (Appendix II); and (3) a detailed schedule of events/activities that leads to the compilation and dissemination of quarterly GDP statistics (Appendix III).

***Recommendation:***

- The authorities should finalize the milestone dates in the RBM workplan; revise the annual and quarterly GDP events/activities dates to align them with data availability as determined by data supplying partners; adopt the workplans; and begin to implement them.

## Appendix I. Overarching RBM Workplan

### Objective

Objective	Indicator	Target Date	Assumptions
Strengthen compilation and dissemination of data on macroeconomic and financial statistics for decision making according to the relevant internationally accepted statistical standard, including developing/improving statistical infrastructure, source data, serviceability and/or metadata.	Published annual benchmark and related national accounts statistics (NAS) that conform to the <i>System of National Accounts 2008 (SNA 2008)</i> .	<b>March 2019</b>	<ul style="list-style-type: none"> <li>Resources will be provided to ensure the availability of the requisite capacities for compiling NAS.</li> <li>Resources will be provided to ensure that the necessary personnel and infrastructure for compiling NAS are available.</li> <li>Various Government of Bhutan agencies will cooperate.</li> </ul>

### Work Plan

No.	Outcomes	Indicators	Baselines	Milestones	Responsible Parties
1	The Legal/institutional environment is conducive to compile and disseminate macroeconomic and financial statistics.	An adequate statistical law exists to enable/empower the compiling agency to collect source information and requires safeguarding confidential information, through legal requirements and penalties.	There is no statistical law or the law contains one of the following deficiencies: legal reporting requirements, penalties, or confidentiality safeguards are inadequate.	In response to the baseline, the National Statistics Bureau assists in developing a new Statistics Act during <b>2017 and 2018</b> .	NSB

No.	Outcomes	Indicators	Baselines	Milestones	Responsible Parties
2	Data are compiled and disseminated using the concepts and definitions of the latest manual/guide.	The general framework, concepts and definitions broadly follow the 2008 SNA.	As of June 2017, the concepts and definitions do not fully follow the <i>SNA 2008</i> . The base period is outdated; double-deflation is not used to estimate constant-price gross value added (GVA) for any economic activity; and etc. These issues can be addressed through a new benchmark.	In response to the baseline, SUTs are prepared as outlined in item 3, which will form the basis of a new 2015 benchmark and base year. As part of the benchmarking and rebasing process, other baseline issues will be addressed by the end of <b>March 2020</b> . (See the detailed annex to this work plan in Appendix II.)	NSB
				As part of the benchmarking and rebasing effort, NSB staff absorbs technical assistance and participates in National Accounts Statistics and Price Statistics Training organized by the South Asia Regional Training and Technical Assistance Center (SARTTAC) <b>at mutually agreed upon times during FY 2017 and 2018</b> .	NSB

No.	Outcomes	Indicators	Baselines	Milestones	Responsible Parties
3	Data are compiled and disseminated using the coverage and scope of the latest manual/guide	ISWGNA <i>recommended</i> tables and accounts: annual supply and use tables.	The range of accounts/aggregates compiled and disseminated does not satisfy national data needs, or is incomplete relative to the ISWGNA minimum requirements and/or the recommended tables and accounts	Relative to the baseline, additional accounts/aggregates (annual supply and use tables (SUTs) are developed to meet national data requirements and ISWGNA minimum requirements and/or recommended tables and accounts <b>by May 2019</b> .	NSB
4	Source data are adequate for the compilation of the national accounts.	Source data needed to compile <u>annual estimates</u> are comprehensive and reasonably approximate the definitions, scope, classifications, valuation, time of recording required, and timely.	Source data are incomplete for annual estimates due to lack of availability, quality, scope/coverage, classifications, valuation, time of recording, etc. Deficiencies in source data may include: <ul style="list-style-type: none"> <li>• economic surveys of enterprises or establishments (financial and non-financial corporations)</li> <li>• household surveys</li> <li>• fiscal data (government finance statistics or other fiscal data)</li> </ul>	Relative to the baseline, improvements to source data used for <u>annual estimates</u> are made. <b>by June 2019</b> .	NSB

No.	Outcomes	Indicators	Baselines	Milestones	Responsible Parties
			<ul style="list-style-type: none"> <li>• price data</li> <li>• other data for annual estimates including administrative data where appropriate.</li> </ul>		
5	Data are compiled and disseminated using the classification of the latest manual/guide.	<p>The classifications used are in broad conformity with internationally recommended systems:</p> <ul style="list-style-type: none"> <li>• The 2008 SNA is followed to classify institutional units, transactions and other flows</li> <li>• ISIC, NACE or compatible national industry classification</li> <li>• CPC, CPA or compatible national product classification</li> <li>• COICOP is used to classify household consumption</li> <li>• COFOG is used to classify functions of government.</li> </ul>	Some classification systems used are not fully consistent with internationally accepted standards, guidelines, or good practices. Shortcomings may involve the 2008 SNA, ISIC, NACE or compatible national industry classification; CPC, CPA or compatible national product classification; COICOP; or COFOG.	Relative to the baseline, classifications are updated to conform more closely to internationally recommended systems involving: the 2008 SNA, ISIC, NACE or compatible national industry classification; CPC, CPA or compatible national product classification; COICOP; or COFOG <b>by March 2020.</b>	NSB

No.	Outcomes	Indicators	Baselines	Milestones	Responsible Parties
6	Metadata released internally and to the public have been strengthened consistent with the dataset to enhance interpretation and analysis.	Metadata sufficient to support data analysis have been developed and are available to users.	Metadata are lacking and/or are insufficient to support data analysis.	Relative to the baseline, new meta data are prepared that describe preparation of the 2015 SUT; the inter-benchmark and post benchmark period (current-, constant-price, and prices) will be released <b>by March 2020</b> .	NSB
7	Higher frequency data has been compiled and disseminated internally and/or to the public	National accounts are compiled and disseminated on a quarterly basis.	National accounts are compiled and/or disseminated on an annual basis.	Frequency of national accounts compilation and/or dissemination improves from annual to quarterly <b>by June 2021</b> . (See the detailed annex to this work plan in <b>Appendix III</b> .)	NSB
8	Business processes documentation for compilation and/or dissemination of macroeconomic and financial statistics is stored, accessed and regularly updated.	Adequate business processes documentation exists, is well stored, accessible, and regularly updated to enable the compiling/disseminating statistical agency to sustain good statistical practices.	As of April 2017, business process documentation either does not exist, is inadequate, or is not well stored, accessible, and/or regularly updated.	Relative to the baseline, business processes documentation has been improved by becoming adequate, stored, accessible, and/or regularly updated <b>by June 2019</b> .	

## Appendix II. Phased Annual GDP Rebasing Program

Phase	Events/Activities	Months
1	Identify the statistical, methodological, and definitional/conceptual revisions that will be incorporated during the rebenchmarking and rebasing program, <b>including adoption of a new industrial classification scheme (ISIC 4)</b> .	Jul 17
2	Data preparation	Aug 17 – Jun18
2a	Complete the 2014 SUT that is currently under development	Aug 17
2b	Finalize plans (form preparation and logistics) for the Economic Census	Sep 17
2c	Conduct the Economic Census	Oct – Dec 17
2d	Tabulate Economic Census results	Jan – Jun 18
3	Prepare a 2015 SUT using Economic Census and other available data	Jul 18 – May 19
3a	Deciding SUT configuration (industries and products)	Jul 18
3b	Prepare supply table	Aug – Oct 18
3c	Prepare valuation matrices	Nov 18
3d	Prepare intermediate consumption table	Dec – Jan 19
3e	Prepare final uses	Feb – Mar 19
3f	Manual balancing of the table	Apr – May 19
4	Compiling consistent historical annual price series: 2000 – 2018	Jun – Jul 19
4a	Rereferencing prices, 2015=100 (2000-2018) <b>(Product and Expenditure)</b>	Jun – Jul 19
5	Compiling consistent historical annual constant- and current-price series and deflators: 2000 – 2018	Aug -Dec 19
5a	Develop consistent constant- and current-price series and, where necessary, wedging 2015 differences (new benchmark versus published values) back to 2001	Aug – Sep 19
5b	Extrapolating 2015 benchmark estimates out to 2018 <b>(Product and Expenditure)</b>	Oct – Nov 19
5c	Deflating, reflating, and checking the consistency of implicit price deflators	Dec 19
6	Review/Analyze the estimates and prepare sources, methods, and revisions metadata text	Jan – Feb 20
7	Announcing and conducting the GDP release (2000 -2018)	Mar 20

## Appendix III. Phased Development of Quarterly GDP Expenditure Estimates

Phase	Events/Activities	Months
1	Determine the expected configuration (categories), data sources, and methods for compiling quarterly GDP Expenditure estimates in current and constant prices	July – Sep 17
2	Collect and assemble source data and methods for compiling quarterly GDP Expenditure estimates in current and constant prices. <b>Ensure that source data are available in a timely manner.</b>	Jan – Dec 18
2a	Household and NPISH final consumption expenditures	Jan – Mar 18
2b	Government final consumption expenditures	Apr – Jun 18
2c	Gross Fixed Capital Formation	Jul – Sep 18
2d	Inventories	Oct – Dec 18
2e	Net Exports (Exports – Imports)	Oct – Dec 18
3	Develop quarterly current-price indicators for 2014 – 2018, and the related price deflators	Jan – Dec 19
3a	Household and NPISH final consumption expenditures (begin with 2017 using QHCES data); for 2014-2016, this category will be estimated as a residual	Jan – Mar 19
3b	Government final consumption expenditures	Apr – Jun 19
3c	Gross Fixed Capital Formation	Jul – Sep 19
3d	Inventories	Oct – Dec 19
3e	Net Exports (Exports – Imports)	Oct – Dec 19
4	Interpolate new annual benchmark current-price controls using quarterly indicators (2014 – 2018)	Apr – Jun 20
4a	Household and NPISH final consumption expenditures (begin with 2017 using QHCES data); for 2014-2016, this category will be estimated as a residual	Apr 20
4b	Government final consumption expenditures	Apr 20
4c	Gross Fixed Capital Formation	May 20
4d	Inventories	May 20
4e	Net Exports (Exports – Imports)	Jun 20
5	Interpolate new annual benchmark price controls (2015=100) using quarterly prices (2014 – 2018)	Jul – Sep 20
5a	Household and NPISH final consumption expenditures	Jul 20
5b	Government final consumption expenditures	Jul 20
5c	Gross Fixed Capital Formation	Aug 20

Phase	Events/Activities	Months
5d	Inventories	Aug 20
5e	Net Exports (Exports – Imports)	Sep 20
6	Deflate quarterly GDP Expenditure estimates (2014 – 2018). Ensure that quarterly constant-price estimates are consistent with annual controls.	Oct – Nov 20
6a	Household and NPISH final consumption expenditures	Oct 20
6b	Government final consumption expenditures	Oct 20
6c	Gross Fixed Capital Formation	Nov 20
6d	Inventories	Nov 20
6e	Net Exports (Exports – Imports)	Nov 20
7	Compute quarterly GDP Expenditure implicit price deflators and ensure that they are consistent with annual controls (2014 - 2018)	Dec 20
8	Conduct a thorough review of the estimates in current and constant prices (2014-2018)	Jan 21
9	Prepare sources, methods, and revisions metadata text, <b>including a revision policy</b> . Develop prototype for quarterly GDP Expenditure <b>press release</b> . Also, gather current-price source data and price statistics for QI 19 – QIV 20.	Feb – Mar 21
10	Compile new quarterly GDP Expenditure estimates for the period QI 19 – QI 21	Apr – Jun 21
10a	Prepare current-price estimates	Apr 21
10b	Prepare constant-price estimates	May 21
11	Announce release, finalize press release, and conduct the quarterly GDP Expenditure release (2015:I - 2021:I)	June 30, 2021

## Appendix IV. Status of Recommendations from Previous TA Missions

No.	Recommendation	Status as of June 2017
1	Increase staff to compile and disseminate quarterly GDP estimates.	<b>In progress.</b> The intent is to increase staff; the timing is uncertain.
2	Collaborate with other Government of Bhutan agencies to develop a Business Register.	<b>In progress.</b> The NSB is implementing a plan to collaborate with the Department of Revenue and Customs to develop a Business Register. Assistance is also coming from the Asian Development Bank.
3	Develop a memorandum of understanding/agreement with the revenue authority to ensure access to VAT data when they become available.	<b>Incomplete.</b> Operationalization of a VAT in Bhutan is in the future. Appropriate actions will be taken leading up to the initiation of a VAT.
4	Secure funds from the World Bank to perform a household Living Standards Survey (LSS)	<b>Complete.</b> A 2017 LSS has been conducted using World Bank resources. The results are awaited.
5	Develop plans for expanding Bhutan's producer price index (PPI).	<b>Complete.</b> A plan is being implemented to rebase and expand the PPI. The effort will rely on source data from an upcoming Economic Census.
6	Consider the development of export and import price indexes (XMPI)	<b>Complete.</b> The NSB will collaborate with UNESCAP to develop XMPIs beginning in July 2017. The work should yield results by mid-2018.
7	Collaborate with the Ministry of Agriculture and Forestry to develop more timely agriculture statistics.	<b>In progress.</b> The NSB is considering a plan to assist the Ministry in developing output forecasts for key crops based on training from the US Foreign Agriculture Service.
8	Finalize plans to rebase and re-benchmark GDP estimates.	<b>In progress.</b> Plans developed during the mission will be finalized in the near term.
9	Identify new indicators for the compilation of quarterly GDP estimates.	<b>In progress.</b> Indicators are being developed to compile quarterly GDP (quarterly GDP) by expenditure and by economic activity.
10	Undergo training in seasonal adjustment.	<b>Incomplete.</b> Will undertake seasonal adjustment training in the future; including during an upcoming SARTTAC NAS TA mission.

No.	Recommendation	Status as of June 2017
11	Incorporate certain improvements to the quarterly GDP compilation system that is under development.	<b>In progress.</b> For example, during the mission, work was performed on improving the compilation of FISIM, which would be incorporated on a quarterly basis if the decision is made to compile and disseminate GDP by economic activity.
12	Obtain trade data on ferrous alloys from the Royal Monetary Authority or from Indian authorities to use as an indicator for manufacturing gross value added (GVA).	<b>Complete.</b>
13	Develop a volume indicator for electricity output.	<b>Complete.</b> For the quarterly GDP effort, a quarterly volume indicator has been developed.
14	Adopt double-deflation of electricity in the GDP accounts.	<b>Incomplete.</b> Double deflation is complicated by the very high input-output ratio associated with hydro-electricity; and inadequate deflators. Volume extrapolation may be an alternative.
15	Develop an improved indicator for GDP construction estimates using a variety of source data.	<b>Complete.</b> Various construction products are now used to estimate construction activity using the commodity flow method.
16	Develop an improved indicator for estimating GVA for government services that accounts for timing inconsistencies.	<b>In progress.</b> Volume extrapolation may represent a good alternative to using government spending, which is lumpy.
17	For selected taxes, adopt a quarterly indicator of import duties as opposed to excise revenue because the former has fewer timing issues.	<b>Complete.</b> The issue was resolved using an adjustment to account for periodic Excise Refunds from the Government of India.
18	Develop high-quality business process documentation.	<b>Incomplete.</b> This will be a future undertaking.

## Appendix V. Comments on Draft EC Data Collection Form

Bhutan's National Statistics Bureau (NSB) is drafting an Economic Census form, and requested that the International Monetary Fund's (IMF's) South Asia Regional Training and Technical Assistance Center (SARTTAC) provide early comments on the form. SARTTAC's Real Sector Statistics Advisor provided comments on the following five sections of the form that have been developed: General Information, Employment, Revenue and Expenses, Assets, and Inventories.

### General Information

- Request respondent's email address.
- Request that respondent indicate the types of primary goods/services that are being produced to assist with the industry classification process.

### Employment

- Request information on the number of "part-time" workers.
- Separately identify "bonuses" as a type of compensation.
- Request information on the type and amounts associated with compensation in kind: e.g., uniforms used explicitly for work; meals provided during working shifts; equipment including vehicles that are provided to employees by employers to perform work; etc. (This applies for accrual accounting purposes. National accounts statistics should be measured on an accrual basis.)

### Revenue and Expenses

- Create a "Property income" category, which would include "interest," "dividends," "rent/royalty," etc.
- Among costs/expenses, include "Depreciation," "Contracted costs, including consultancies," and "Board of Directors costs."

### Assets

- Among fixed assets, include a category for "Intellectual property assets, to include "R&D," "Computer software," "Databases," etc.
- Create a category for "Valuables."
- For the "Capital Expenditures" category, be certain to indicate that this category should include "Additions and alterations and Major replacements" to existing structures.
- Consider collecting data on the eight categories each of Financial Assets and Liabilities for later development of the "sequence of accounts."

### Inventories

Include a category for "Normal inventory losses" due to wastage, pilferage, etc.

## Appendix VI. Compiling GVA for Insurance

The following is a methodology for compiling gross value added for Bhutan's BIL (Bhutan Insurance Limited) using the related annual company financial report for 2015.

### Gross output of Insurance (non-life)

*Premiums Earned* (152.9 mil Nu) [page 6 and footnote 18 on page 48]

*Premium supplements* (54.4 mil Nu) [footnote 13b on page 46] {profits for the year in the General Reserve Fund}

*Actual Claims* (100.4 mil Nu) [page 6 and footnote 22a, b, and c and footnote 23 on page 50] {Claims paid, plus outstanding claims, minus outstanding claims from the beginning of the year, less claims recovered from reinsurance.}

*Change in Equalization Provision* (33.6 mil Nu) {footnote 17a on page 48} {provisions for unexpired risks (added)}.

**Gross output** is derived as  $(152.9 + 54.4) - (100.4 + 33.6) = 73.3$  mil Nu.

*Intermediate consumption (IC)* is derived from footnote 25 (page 51): Operating Expense (46.5 mil Nu). In addition, the value for Commission Expense (9.4 mil Nu) is included (footnote 24 on page 50). However, Operating Expense is reduced by the amount of Employees Remuneration and welfare benefits (29.0 mil Nu) and Depreciation and Amortization (4.1 mil Nu), which are part of GVA.

**Intermediate consumption** is computed as:  $46.5 + 9.4 - 29.0 - 4.1 = 22.8$  mil Nu.

**Gross Value Added** is calculated as:  $(GO - IC) 73.3 - 22.8 = 50.5$  mil Nu.

**Note: It is also necessary to compile the GO (mainly investment returns) and IC (investment-related and adjusted expenses) for BIL's financing operation.**

**This compilation of GVA for BIL is facilitated by the fact that receipts and expenditures for BIL's non-life insurance and financing operations are identified separately in the company's annual report. Similar compilations for other Bhutan insurance companies is made difficult because separate delineation of insurance and financing operations is not presented in the related annual reports for recent years.**

## Appendix VII. Officials Met during the Mission

No.	Name	Agency	Email Address
1.	Mr. Chhime Tshering	NSB	<a href="mailto:ctshering@nsb.gov.bt">ctshering@nsb.gov.bt</a>
2.	Mr. Riendrisonam Lhendup	NSB	<a href="mailto:r_lhendup@hotmail.com">r_lhendup@hotmail.com</a>
3.	Ms. Sangay Bida	NSB	<a href="mailto:sangayb63@gmail.com">sangayb63@gmail.com</a>
4.	Mr. Penjor Gyeltshen	NSB	<a href="mailto:pgyeltshen@nsb.gov.bt">pgyeltshen@nsb.gov.bt</a>
5.	Mr. Bikash Gurung	NSB	<a href="mailto:bikashgurung@nsb.gov.bt">bikashgurung@nsb.gov.bt</a>
6.	Mr. Leki Wangdi	NSB	<a href="mailto:leki.wangdi1988@gmail.com">leki.wangdi1988@gmail.com</a>
7.	Sonam Chodey	NSB	<a href="mailto:sonamcee@gmail.com">sonamcee@gmail.com</a>
8.	Tashi Namgay	NSB	<a href="mailto:tnamgay@nsb.gov.bt">tnamgay@nsb.gov.bt</a>
9.	Tobden	NSB	<a href="mailto:tobden@nsb.gov.bt">tobden@nsb.gov.bt</a>