

FOR OFFICIAL USE ONLY

INTERNATIONAL MONETARY FUND

Statistics Department



TUVALU

REPORT ON THE NATIONAL ACCOUNTS STATISTICS MISSION

October 14 to 21, 2010

**Prepared by Michael Andrews
Statistics Advisor
Pacific Financial Technical Assistance Centre**

October 29, 2010

The contents of this report constitute technical advice and recommendations given by the staff of the International Monetary Fund (IMF) to the authorities of a member country in response to their request for technical assistance. With the written authorization of the recipient country's authorities, this report (in whole or in part) or summaries thereof may be disclosed to IMF Executive Directors and their staff, and to technical assistance providers and donors outside the IMF. Disclosure of this report (in whole or in part) or summaries thereof to parties outside the IMF other than technical assistance providers and donors shall require the written authorization of the recipient country's authorities and the IMF's Statistics Department.

Contents	Page
Abbreviations.....	4
Executive Summary.....	5
Action Plan.....	7
I. Introduction.....	10
II. Statistics Prerequisites.....	10
III. Data Sources.....	11
A. Taxation Data.....	11
B. Tuvalu National Provident Fund.....	11
C. Large Corporations’ Financial Statements.....	12
D. Household Income and Expenditure Survey.....	13
E. Population Estimates.....	13
F. Balance of Payments.....	13
G. Source Data – Recommendations.....	13
IV. Compilation Methods.....	14
A. Large Corporations.....	14
B. Government Non-market Sector.....	14
C. Tuvalu National Provident Fund.....	15
D. Compilation Methods – Recommendations.....	15
V. Other Issues.....	15
A. Dissemination.....	15
B. Balance of Payments.....	16
Appendix I. National Accounts Statistics.....	17
Appendix II. Documentation on National Accounts Methodology.....	29
Appendix III. Balance of Payments Statistics.....	33
Appendix IV. Data Template for Trade Data for Balance of Payments.....	35

ABBREVIATIONS

CPI	Consumers Price Index
CSD	Central Statistics Division
GDP	Gross Domestic Product
GNDI	Gross National Disposable Income
GNI	Gross National Income
HIES	Household Income and Expenditure Survey
IMF	International Monetary Fund
PFTAC	Pacific Financial Technical Assistance Centre
STA	Statistics Department, IMF
TA	Technical Assistance
TNPF	Tuvalu National Provident Fund

EXECUTIVE SUMMARY

- In response to a request from the authorities and the IMF's Asia Pacific Department, I undertook a technical assistance mission to Funafuti during the period October 14 to 21, 2010, to assist the Central Statistics Division (CSD) in improving the quality of national accounts statistics. This mission is part of the regional technical assistance provided by IMF Pacific Financial Technical Assistance Centre (PFTAC)¹ to member countries.
- The mission followed a similar mission in 2009 which established new methodology for the national accounts, updated estimates to 2008, rebased the constant price estimates to a 2005 base year and provided training to counterparts. Little progress had been made on the previous mission's recommendations, largely due to a lack of capacity – no one is working on macroeconomic statistics.
- The mission completed estimates for 2009 and revised previous years where new or revised data were available. The coverage of source data was better than for the 2009 mission. However, significant problems exist with data from the Tuvalu National Provident Fund (TNPf) with records missing and payments of arrears being recorded along with regular payments of superannuation contributions, making the data highly volatile and difficult to interpret.
- The action plan agreed with the authorities is provided below. The main findings and recommendations are that:
 - the CSD requires two additional staff allocated to economic statistics. Senior government officials agree that this is necessary but cannot currently fund these positions (the Asia and Pacific Department reinforced this message during the recent IMF annual meetings).
 - the CSD should liaise closely with the Inland Revenue Department to ensure access to the unit record data of the recently introduced consumption tax. Begun in July 2009, the new tax should provide significantly better source data for the national accounts, in terms of coverage and timeliness for future estimates.
 - the CSD should liaise closely with the TNPf to improve the data by separating ongoing payments of contributions to the TNPf from the payment of arrears. The construction industry was particularly affected by this data problem and the authorities agreed to investigate the data further before the estimates are finalized.

¹ PFTAC is a part of a network of IMF Regional Technical Assistance Centres and is supported by several donors. The donors include the Asian Development Bank, Australia, Japan, Korea and New Zealand. PFTAC TA is provided to Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

- counterparts are now familiar with the source data and methodology for central government and updated the estimates for that sector with minimal assistance. Some training was provided, although this was limited due to the lack of staff working on the national accounts other than on data collection.
- The mission had limited discussions on issues arising from a recent balance of payments mission. Again, little progress has been made on that mission's recommendations. External trade data were being revised by CSD during the mission, following the resolution of problems with access to Customs data. A data template was provided to CSD, identifying the analysis needed of the trade data to provide the information needed to compile the balance of payments standard components.
- The Advisor would like to acknowledge the cooperation and support of the Tuvalu authorities and staff.

ACTION PLAN

This section sets out in tabular form the action plan for the development of Tuvalu's national accounts statistics over the next two years.

OBJECTIVES

Objectives	Verifiable Indicators	Completion Date	Assumptions
Improve the coverage, reliability and timeliness of national accounts statistics.	Improved quality of national accounts statistics, and institutional infrastructure and operational capacity to compile these statistics.	10/31/2012	The authorities ensure that appropriate staff and other resources are available to implement this action plan.

ACTIVITIES/OUTPUTS

DQAF	Priority	Outputs	Verifiable Indicators	Completion Date	Assumptions/Implementation Status
		Improve institutional infrastructure and operational capacity to compile national accounts statistics.	Institutional infrastructure and operational capacity to compile national accounts statistics improved.		
0.2.1	H	Recruit one additional statistician	CSD operating effectively with all five establishment positions filled.	01/31/2011	Five positions are filled but none are working on macroeconomic statistics. At least one more person is needed.
0.2.1	H	Increase access to computers, Internet, telephone, printers, back-up server, offsite archiving, and transport	CSD operating effectively with infrastructure that is commensurate with operational workloads.	06/30/2011	No progress. Computers are adequate, access to printers needs to be provided, along with a back-up routine such as copying work periodically from one computer to another or acquiring a portable hard drive and backing up data to it.

DQAF	Priority	Outputs	Verifiable Indicators	Completion Date	Assumptions/Implementation Status
		Improve the availability, coverage and quality of source data required to compile national accounts statistics.	The availability, coverage and quality of source data required to compile national accounts statistics improved.		
3.2.1	H	Complete collection of the high priority data needed for compiling the 2009 estimates.	High priority data collected.	09/30/2010	Most data had been collected, the remainder obtained during the mission.
3.2.1	H	Establish effective coordination mechanisms and administrative data collection from Government (central and local) agencies, departments and state-owned enterprises.	Coordination and administrative data collection from governments and state-owned enterprises significantly improved.	12/31/2009	CSD has strong relationships with other government agencies and is able to obtain data effectively.
3.2.1	H	Improve access to, and regular reporting of annual Tax Department industry level and business registration data.	Tax Department providing timely industry level and business registration data on an annual and quarterly basis.	12/31/2009	CSD has ready access to these data.
3.2.1	H	Begin collecting monthly data from the Tuvalu Consumption Tax.	Regular supply of data.	12/20/2010	Requires a monthly procedure to be followed consistently.
3.2.1	H	Liaise with TNPF for supply of data monthly, and/or separate identification of arrears and other irregular payments.	Monthly data regularly collected and irregular payments identified.	01/30/2011	Requires an agreement with TNPF, and a monthly procedure to be followed consistently.
3.2.1	H	Investigate the collection of volume data for large corporations.	Quarterly collection of volume data as indicators of constant price value added.	03/31/2011	
		Improve compilation methods for national accounts statistics.	Compilation methods for producing national accounts statistics improved.		
3.3.2	M	When audited Electricity Corporation financial statements are released, remove the suppression of their data.	Revised tables published including detail for the Electricity industry.	12/20/2010	

DQAF	Priority	Outputs	Verifiable Indicators	Completion Date	Assumptions/Implementation Status
3.3.2	H	Incorporated volume indicators into constant price methodology.	Volume data being used as indicators for constant price estimates.	10/30/2011	Availability of suitable data to be investigated by CSD.
3.3.2	H	Incorporate 2010 HIES data into the CPI rebase and the 2010 national accounts estimates.	Revised current price benchmark estimates for the informal sector incorporate the 2010 HIES and rebased CPI.	10/30/2011	CPI rebase was begun in October 2010.
3.3.2	H	Rebase the constant price series to 2010 base year.	Series rebased to 2010 base year.	10/30/2011	
3.3.2	H	Review methodology for use of consumption tax data.	Revised methodology adopted.	10/30/2011	
5.1.1	M	Adopt a rounding procedure for published tables.	Rounding is a standard procedure for all published tables.	03/31/2011	
5.1.1	H	Adopt the 2009 national accounts estimates as official and publish them on CSD website.	Tables published on CSD website.	11/30/2010	
5.1.1	H	Report data to IMF Statistics Department.	Data supplied to IMF Statistics Department.	11/30/2010	

Priority Scale: H - High M - Medium O - Other

I. INTRODUCTION

1. In response to a request from the authorities and the IMF's Asia Pacific Department, I undertook a technical assistance mission to Funafuti during the period October 14 to 21, 2010, to assist the Central Statistics Division (CSD) in improving the quality of national accounts statistics and producing estimates for 2009. This activity 11STS36 is undertaken within the context of the following project: National accounts statistics STA_TUV_2007_07.
2. The mission worked closely with management and staff from CSD and the Ministry of Finance and Economic Planning. The Advisor would like to acknowledge the cooperation and support of the Tuvalu authorities and staff.
3. The mission provided technical assistance to: (i) review progress made on the implementation of previous missions' recommendations; (ii) assist in the update of national accounts estimates to 2009; (iii) update the action plan to enable Tuvalu to improve source data and to continue the improvement of methodology for the national accounts; and (iv) provide on the job training.
4. Little progress had been made on recommendations of the 2009 mission, largely due to a lack of staff working on macroeconomic statistics. Counterparts had made reasonable progress in collecting source data as requested prior to the mission but some data were only available at the end of the mission, restricting time for analysis.
5. A recent balance of payments technical assistance mission had made methodology improvements, updated the estimates to 2009 and made a number of recommendations for improvement. The mission briefly discussed the balance of payments developments and found that no progress had been made.

II. STATISTICS PREREQUISITES

6. The major constraint to progress by CSD on national accounts (and balance of payments) is the lack of staff. The mission concurs with previous recommendations that two additional staff be appointed to work on macroeconomic statistics, to supplement the existing five staff. The Minister and Secretary of Finance agree that this is necessary but do not have sufficient funds for the positions. One additional position is strongly recommended and may be more achievable than the ideal of two.
7. Two CSD staff attended a regional national accounts training seminar in Fiji in 2009 and have a good general understanding of the methodology used. The main constraint preventing CSD compiling the estimates themselves is that they have other duties which are given higher priority. This is unlikely to change until at least one additional position is created and filled.

8. A proposal for a UNDP-funded resident advisor has not been implemented and the opportunity appears to have lapsed.

III. DATA SOURCES

9. CSD has good relationships with key data suppliers within government and are able to obtain data quickly, to the extent that the data are available. When CSD has more time to devote to the national accounts they will need to become more analytically critical of the data and to provide constructive feedback on data quality issues. Some training on analysis may be needed.

A. Taxation Data

10. Private corporations submit annual tax returns with tax being assessed on net profit. CSD obtained the available returns from the tax authorities and these data were used to directly estimate the value added of the larger corporations.

11. In July 2009 a new consumption tax was introduced in Tuvalu. This should become a valuable data source for the national accounts and CSD needs to discuss with the tax authorities the requirement for access to unit record data from the consumption tax system. These data should be timely and an accurate indicator of activity for those sectors in scope of the tax. CSD should request all data items and establish a regular collection of the data, ideally at least quarterly, to ensure timely supply. The consumption tax data will provide high frequency and timely indicators of economic activity.

B. Tuvalu National Provident Fund

12. The TNPF collects compulsory contributions by employers and employees as well as voluntary contributions from self employed people. The data on contributions are used as an indicator of salaries and wages and thereby value added for industries where no better data exist. However, the data from the TNPF's records do not distinguish between regular contributions and arrears of contributions which may be paid when businesses have sufficient cash flow. Consequently, the data are a poor indicator of the level or growth in employment or activity and need considerable analysis for statistical purposes. CSD should discuss with TNPF if it would be possible to separately identify receipts of arrears from the regular payments. Obtaining the data on a monthly basis may enable better identification of payments of arrears, if the TNPF is unable to record arrears separately from regular payments.

13. A further issue with the TNPF data is that it includes contributions by the numerous seamen who work on foreign ships. These seamen are resident² but employed by non-resident corporations. Therefore, their compensation of employees is not part of Tuvalu's GDP, but is part of Tuvalu's Gross National Income. Their contributions to the TNPF should not be included in the estimation of GDP for the resident agencies which arrange their contracts. However, the TNPF data for the agencies have, in 2008 and 2009, included the contributions of the seamen's TNPF contributions as if they were employees of the agencies. These data have been adjusted in the calculations for 2008 and 2009 to exclude these contributions.

C. Large Corporations' Financial Statements

14. Financial statements were available for all but one of the large corporations for 2009 as well as further accounts for some corporations for previous years. This is better coverage than for the previous mission and enables a more robust estimate for 2009 and revisions to prior years. Value added for the missing large corporation was estimated on the basis of their tax paid inverted by the historical average of their value added to tax ratio (which was stable over the last few years). The Electricity Corporation financial statements had not yet been cleared by the Government Audit Office and were provided to the mission on the condition of confidentiality – the electricity industry's contribution to GDP is suppressed in the tables for publication and is combined with the construction industry. Once the Auditor releases the report the suppression can be lifted.

15. For constant price measures the present method is limited by data availability to price deflation by CPI sub-indexes for the most part. Better measures of growth would be obtained if volume data were available for key activities for the large corporations. For the electricity industry, the volume of electricity generated, in kilowatt hours, is used to extrapolate base year value added. It is recommended that CSD investigate whether the large corporations have data on the volume of goods and services they produce. The key indicators are:

- Telecom: number of call minutes, by local and overseas, mobile and land line; number of phone line rentals; volume of internet traffic, etc.
- BP South West Pacific: volume of fuel sold, by type and by major groups of customers (at least for government, electricity generation, remainder).
- Vaiaku Lagi Hotel: number of guest nights.

² Their center of predominant economic interest is Tuvalu. Refer System of National Accounts 2008, paragraph 26.38 c.

D. Household Income and Expenditure Survey

16. A HIES had just been completed. However, the data were still being assessed by the Secretariat of the Pacific Community (SPC) advisors who assisted with the survey. These data were not provided to the mission and have not been incorporated into the national accounts estimates at this time. These data should be used to prepare new benchmarks for the informal sector, when the next national accounts estimates are compiled in 2011.

17. The HIES is also being used by an SPC advisor to revise the CPI weights. The mission provided some brief comments on the draft report that explains the derivation of the revised weights. The mission's main comments related to the commodity groups whose weights were adjusted from those provided by the HIES, viz., alcohol and tobacco. For these products, the SPC advisor had used arbitrarily determined ratios for trade margins to apply to imports data - the mission suggested instead using actual margins data on wholesale and retail businesses as used in the national accounts.

E. Population Estimates

18. A UN Population Fund expert had compiled a series of population estimates, using revised migration and births and deaths data. The revised series has been adopted by CSD as official. However, pending the incorporation of the HIES 2010, the revised population estimates were not fully incorporated into the estimated number of households that is used in the national accounts estimates. The revised migration and births and deaths data were used to revise 2007 and 2008 only. The full population series should be used to revise the number of households and be incorporated with the HIES 2010 during 2011.

F. Balance of Payments

19. The estimates of Gross National Income (GNI) and Gross National Disposable Income (GNDI) are revised using the tables compiled by the recent balance of payments mission. These tables were revised slightly by the current mission to incorporate fiscal data supplied by the IMF's Asia and Pacific Department, sourced from the resident Advisor to the Tuvalu Minister of Finance.

G. Source Data – Recommendations

20. *The following improvements in source data are recommended:*

- Discuss with the tax authorities the data needs from the new consumption tax for national accounts purposes.
- Discuss with the TNPF whether arrears can be separated from regular payments of contributions. Alternatively, obtain the data monthly, to better identify arrears and other irregular payments.

- Incorporate the HIES 2010, revised number of households and rebased CPI into the national accounts estimates during 2011.
- Investigate the availability of volume data for large corporations to enable better constant price estimates.

IV. COMPILATION METHODS

21. The national accounts comprise a production measure of GDP in current and constant prices, gross national income and gross national disposable income. The current price estimates for the informal sector are based on the 2004/05 HIES. The constant price estimates use a 2005 base year.

22. The few changes of method implemented by the mission, and the causes of significant revisions, are described below. Options for improvement are limited by the narrow range of data available. Refer to the 2009 mission report for more detail on methodology.

A. Large Corporations

23. Audited financial statements were available for all but one of the large corporations for 2009. 2008 statements were also available, enabling revisions to estimates for those corporations that did not have accounts available for the previous mission. A revision was made to the methodology for Tuvalu Telecom, to include satellite costs in intermediate consumption, reducing value added.

24. Because of the small scale of the Tuvalu economy, the accuracy of the national accounts estimates is dependent on the financial statements of the large corporations. The absence of any alternative data may result in significant revisions to the estimates, particularly to the current price estimates. Every effort needs to be made to obtain these statements in a timely manner. If volume data are available for the large corporations, these data may be more timely than the audited financial statements and may therefore provide accurate indicators of growth which can be reflatd to estimate current price values.

B. Government Non-market Sector

25. CSD counterparts followed the methodology established by the previous mission and incorporated the fiscal data to estimate the central government non-market sector. A revision was made by the counterparts who advised that “rations” recorded in the fiscal data paid to the government education institutions are for food supplied to students. Previously, it had been assumed that these “rations” were wages in kind. The revision was made to all years’ estimates.

C. Tuvalu National Provident Fund

26. The 2009 mission used consistent TNPF data from 2002 to 2007. For 2008 incomplete data were provided which proved to be inconsistent with previous years and were rejected. Estimates were made in place of these data. The current mission was provided with data for 2008 and 2009 that were generally consistent with previous years.

27. However, for a number of businesses, the data are affected by missing records and by the payment of arrears as noted above. Consequently, a number of adjustments were required to these data, on the advice of counterparts where possible. In a small number of cases, better data were obtained from the TNPF and these were incorporated. However, the low quality of these data remains a weakness in the estimates (approximately 20% of GDP is estimated using TNPF data).

D. Compilation Methods – Recommendations

28. *The following improvements are recommended:*

- In 2011, rebase the constant price estimates to 2010, incorporating HIES 2010 and the rebased CPI.
- Review methodology to incorporate consumption tax data.

V. OTHER ISSUES

A. Dissemination

29. Previous missions noted that CSD does not have a strong publication policy. More attention is needed to ensure timely release of the latest data on the CSD website³. This is particularly important now that Tuvalu is an IMF member because membership obliges the authorities to report data regularly to the IMF Statistics Department.

30. It is recommended that CSD adopt the national accounts estimates included in this report as official statistics and publish them on the CSD website. Note that the tables for publication in the compilation spreadsheet include rounded data. This procedure should be adopted by CSD for all its published tables, i.e., round data to an appropriate level of precision, with appropriate documentation on CSD's website.

³ <http://www.spc.int/prism/Country/TV/Stats/Index.htm>

B. Balance of Payments

31. The mission followed up on some issues arising from the recent balance of payments mission. The issues were;

- Trade data. Trade data for 2009 were not available to the CSD and therefore the balance of payments mission had to estimate the data. These data became available during the current mission, although only at an aggregated level, preventing CSD from their regular analysis and checking. However, the total value of imports for 2009 was AUD23m compared with the AUD16.3m estimated by the balance of payments mission. Because of the lack of detail it is not yet possible to complete the analysis needed to incorporate these data into the balance of payments. CSD had also been unable to access a computer with the PCTrade software on it which is used to analyse the trade data – the mission was able to help get the computer running and to access PCTrade.
- The balance of payments mission also did not have final fiscal data which were available to the current mission. The final data require some revisions to the balance of payments income flows, and therefore estimation of GNI and GNDI. The revised balance of payments tables are included in this report at Appendix III (only the tables affected by the revisions are included).
- A number of adjustments are required to external trade data for balance of payments purposes. To help CSD to analyse the trade data to meet balance of payments needs, a data template was provided which itemizes the analysis steps and adjustments required. The template is included at Appendix IV.

APPENDIX I. NATIONAL ACCOUNTS STATISTICS

Summary Table

\$000	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP - Current Prices	23,780	25,604	28,574	28,269	29,399	28,674	30,584	32,457	37,292	35,758
Growth rates		7.7%	11.6%	-1.1%	4.0%	-2.5%	6.7%	6.1%	14.9%	-4.1%
GDP - Constant (2005) Prices	28,509	28,982	31,310	30,290	29,833	28,674	29,632	31,094	34,697	33,886
Growth rates		1.7%	8.0%	-3.3%	-1.5%	-3.9%	3.3%	4.9%	11.6%	-2.3%
Gross National Income		44,815	56,897	41,512	48,730	48,317	50,411	57,948	64,871	63,569
Gross National Disposable Income		50,486	64,437	50,422	58,065	56,364	60,536	67,516	74,150	77,019
Growth rates - GNDI			27.6%	21.7%	15.2%	-2.9%	7.4%	11.5%	9.8%	3.9%

Table 1 Current Price

		2003	2004	2005	2006	2007	2008	2009
A	Agriculture, Forestry and Fishing	4,887	5,471	5,830	6,617	7,273	7,627	7,800
A.1	Crops	1,806	2,094	2,291	2,612	2,990	2,823	3,088
A.2	Animals	1,345	1,433	1,497	1,706	1,820	2,118	2,082
A.3	Forestry	-	-	-	-	-	-	-
A.4	Fishing	1,736	1,944	2,041	2,299	2,463	2,685	2,630
B	Mining and Quarrying	34	35	35	35	35	36	35
C	Manufacturing	344	277	236	270	251	380	363
D	Electricity, Gas and Water	178	461	512	311	524	17	C
E	Construction	2,465	2,132	1,517	2,011	2,768	5,579	4,679
F	Trade, Hotels and Restaurants	2,590	2,824	2,835	3,840	4,453	4,310	2,977
F.1	Trade	2,169	2,354	2,522	3,525	4,055	3,976	2,640
F.2	Hotels and Restaurants	421	470	314	315	398	334	338
G	Transport and Communications	2,250	2,848	2,187	1,833	1,758	1,471	1,657
G.1	Transport	1,114	1,317	1,137	1,059	1,235	1,304	1,377
G.2	Communications	1,136	1,531	1,050	774	523	167	280
H	Finance and Real Estate	5,018	4,650	4,412	4,846	4,855	5,556	5,704
H.1	Banks	2,801	2,362	2,072	2,251	2,138	2,928	2,980
H.2	Insurance and Other Financial Intermediaries	171	189	259	294	330	342	346
H.3	Owner-occupied Dwellings	1,479	1,545	1,559	1,672	1,714	1,704	1,697
H.4	Other Real Estate	296	309	312	334	343	341	339
H.5	Business Services	272	245	210	296	330	241	342
I	Public Administration	4,748	4,870	4,921	5,113	5,035	5,419	5,863
J	Education	2,206	2,302	2,473	2,586	2,580	2,664	2,967
K	Health Community and Personal Services	1,324	1,502	1,483	1,501	1,589	1,540	1,521
L		597	679	565	596	466	626	755
	less Bank Service Charge	1,595	1,526	1,120	953	849	1,064	1,275
	Taxes less Subsidies on Products	3,224	2,875	2,788	2,600	2,765	3,165	2,713

Informal Sector - Households	6,713	7,311	7,617	8,459	9,093	9,537	9,664
Agriculture - crops	1,666	1,932	2,113	2,409	2,758	2,604	2,855
Agriculture - animals	1,268	1,347	1,404	1,595	1,689	1,977	1,936
Fishing	1,395	1,562	1,641	1,847	1,979	2,157	2,113
Mining	34	35	35	35	35	36	35
Manufacturing - Handicrafts	239	232	201	219	223	358	341
Construction - Own Account	337	350	352	348	351	360	348
Owner-occupied Dwellings	1,479	1,545	1,559	1,672	1,714	1,704	1,697
Other Real Estate	296	309	312	334	343	341	339
NPISH	677	730	683	694	568	767	901
Education	128	108	134	56	50	72	86
Health Community and Personal Services	38 511	58 564	50 498	58 580	99 419	124 571	157 659
Government - SOES	4,431	4,731	3,904	2,999	2,547	3,434	3,479
Government - non-market	9,474	10,024	9,903	10,169	10,164	10,590	11,219
Taxes on Products less Imputed Bank Service Charge	1,629	1,349	1,667	1,647	1,917	2,102	1,437
Private Market Sector	5,345	5,254	4,900	6,615	8,168	10,863	9,058

Note: Totals may not sum due to rounding.

C = Confidential - Electricity, Gas and Water has been included with Construction

Table 2 Current Price Growth Rates

		2004	2005	2006	2007	2008	2009
A	Agriculture, Forestry and Fishing	1.119	1.066	1.135	1.099	1.049	1.023
A.1	Crops	1.160	1.094	1.140	1.145	0.944	1.094
A.2	Animals	1.065	1.045	1.140	1.067	1.164	0.983
A.3	Forestry						
A.4	Fishing	1.120	1.050	1.126	1.071	1.090	0.980
B	Mining and Quarrying	1.039	1.006	0.989	1.009	1.024	0.967
C	Manufacturing	0.803	0.855	1.142	0.931	1.512	0.957
D	Electricity, Gas and Water	2.589	1.112	0.608	1.682	0.033	C
E	Construction	0.865	0.712	1.326	1.377	2.016	0.841
F	Trade, Hotels and Restaurants	1.091	1.004	1.354	1.160	0.968	0.691
F.1	Trade	1.085	1.071	1.398	1.150	0.981	0.664
F.2	Hotels and Restaurants	1.118	0.667	1.004	1.264	0.839	1.011
G	Transport and Communications	1.266	0.768	0.838	0.959	0.837	1.126
G.1	Transport	1.182	0.863	0.932	1.166	1.055	1.056
G.2	Communications	1.349	0.685	0.737	0.676	0.320	1.670
H	Finance and Real Estate	0.927	0.949	1.098	1.002	1.144	1.027
H.1	Banks	0.843	0.877	1.086	0.950	1.369	1.018
H.2	Insurance and Other Financial Intermediaries	1.105	1.371	1.135	1.122	1.036	1.013
H.3	Owner-occupied Dwellings	1.045	1.009	1.072	1.026	0.994	0.996
H.4	Other Real Estate	1.045	1.009	1.072	1.026	0.994	0.996
H.5	Business Services	0.902	0.856	1.408	1.116	0.732	1.416
I	Public Administration	1.026	1.011	1.039	0.985	1.076	1.082
J	Education	1.044	1.075	1.046	0.998	1.032	1.114
K	Health	1.135	0.988	1.012	1.059	0.969	0.987
L	Community and Personal Services	1.138	0.831	1.056	0.781	1.343	1.205
	less Bank Service Charge	0.957	0.734	0.851	0.890	1.254	1.199
	Taxes less Subsidies on Products	0.892	0.970	0.933	1.064	1.145	0.857
	GDP	1.04	0.975	1.067	1.061	1.149	0.959

Informal Sector - Households	1.089	1.042	1.111	1.075	1.049	1.013
Agriculture - crops	1.160	1.094	1.140	1.145	0.944	1.096
Agriculture - animals	1.062	1.042	1.136	1.059	1.170	0.979
Fishing	1.120	1.050	1.126	1.071	1.090	0.980
Mining	1.039	1.006	0.989	1.009	1.024	0.967
Manufacturing - Handicrafts	0.969	0.869	1.087	1.021	1.603	0.951
Construction - Own Account	1.039	1.006	0.989	1.009	1.024	0.967
Owner-occupied Dwellings	1.045	1.009	1.072	1.026	0.994	0.996
Other Real Estate	1.045	1.009	1.072	1.026	0.994	0.996
NPISH	1.079	0.935	1.016	0.818	1.350	1.176
Education	0.844	1.247	0.414	0.899	1.439	1.189
Health	1.529	0.857	1.164	1.699	1.254	1.269
Community and Personal Services	1.104	0.884	1.164	0.722	1.363	1.154
Government - SOES	1.068	0.825	0.768	0.849	1.348	1.013
Government - non-market	1.058	0.988	1.027	0.999	1.042	1.059
Taxes on Products less Imputed Bank Service Charge	0.828	1.236	0.988	1.164	1.096	0.684
Private Market Sector	0.983	0.933	1.350	1.235	1.330	0.834

Note: Growth rates calculated on unrounded values.

C = Confidential - Electricity, Gas and Water has been included with Construction

Table 3 Constant Price

		2003	2004	2005	2006	2007	2008	2009
A	Agriculture, Forestry and Fishing	5,530	5,779	5,830	6,252	6,412	6,374	6,420
A.1	Crops	2,173	2,271	2,291	2,457	2,520	2,505	2,567
A.2	Animals	1,420	1,484	1,497	1,606	1,647	1,637	1,630
A.3	Forestry	-	-	-	-	-	-	-
A.4	Fishing	1,937	2,023	2,041	2,189	2,245	2,232	2,223
B	Mining and Quarrying	35	35	35	35	35	35	35
C	Manufacturing	365	285	236	260	237	324	311
D	Electricity, Gas and Water	463	496	512	513	515	521	C
E	Construction	2,431	2,014	1,517	2,121	3,036	6,073	5,607
F	Trade, Hotels and Restaurants	2,763	2,856	2,835	2,695	3,194	2,984	3,084
F.1	Trade	2,299	2,436	2,522	2,430	2,912	2,621	2,700
F.2	Hotels and Restaurants	464	420	314	265	282	364	384
G	Transport and Communications	2,260	2,698	2,187	1,952	1,780	1,659	1,759
G.1	Transport	1,119	1,130	1,137	1,116	1,130	1,124	1,144
G.2	Communications	1,141	1,569	1,050	835	650	535	615
H	Finance and Real Estate	5,216	4,740	4,412	4,749	4,706	5,041	5,176
H.1	Banks	2,972	2,438	2,072	2,175	2,027	2,499	2,550
H.2	Insurance and Other Financial Intermediaries	182	195	259	283	311	292	296
H.3	Owner-occupied Dwellings	1,479	1,545	1,559	1,672	1,714	1,704	1,697
H.4	Other Real Estate	296	309	312	334	343	341	339
H.5	Business Services	288	253	210	285	311	206	292
I	Public Administration	4,938	4,891	4,921	4,979	4,960	5,292	5,371
J	Education	2,454	2,445	2,473	2,448	2,475	2,501	2,621
K	Health	1,474	1,494	1,483	1,489	1,526	1,669	1,710
L	Community and Personal Services	634	701	565	574	439	534	646
	less Bank Service Charge	1,693	1,575	1,120	918	800	908	1,092
	Taxes less Subsidies on Products	3,418	2,974	2,788	2,482	2,578	2,597	2,238
	GDP	30,290	29,833	28,674	29,632	31,094	34,697	33,886

Informal Sector - Households	7,308	7,593	7,617	8,134	8,327	8,375	8,402
Agriculture - crops	2,004	2,094	2,113	2,266	2,324	2,310	2,373
Agriculture - animals	1,332	1,391	1,404	1,505	1,544	1,535	1,528
Fishing	1,556	1,626	1,641	1,759	1,804	1,793	1,786
Mining	35	35	35	35	35	35	35
Manufacturing - Handicrafts	254	239	201	211	211	306	292
Construction - Own Account	353	352	352	352	352	352	351
Owner-occupied Dwellings	1,479	1,545	1,559	1,672	1,714	1,704	1,697
Other Real Estate	296	309	312	334	343	341	339
	-	-	-	-	-	-	-
NPISH	710	750	683	670	538	654	771
Education	128	108	134	56	50	61	73
Health	40	60	50	56	93	106	134
Community and Personal Services	542	582	498	559	395	487	564
	-	-	-	-	-	-	-
Government - SOES	4,918	4,814	3,904	3,806	3,472	3,930	3,998
Government - non-market	9,919	9,873	9,903	9,992	9,981	10,486	10,579
	-	-	-	-	-	-	-
Taxes on Products less Imputed Bank Service Charge	1,726	1,398	1,667	1,565	1,778	1,689	1,146
Private Market Sector	5,709	5,404	4,900	5,465	6,999	9,562	8,990

Note: Totals may not sum due to rounding.

C = Confidential - Electricity, Gas and Water has been included with Construction

Table 4 Constant Price Growth Rates

		2004	2005	2006	2007	2008	2009
A	Agriculture, Forestry and Fishing	1.045	1.009	1.072	1.026	0.994	1.007
A.1	Crops	1.045	1.009	1.072	1.026	0.994	1.025
A.2	Animals	1.045	1.009	1.072	1.026	0.994	0.996
A.3	Forestry						
A.4	Fishing	1.045	1.009	1.072	1.026	0.994	0.996
B	Mining and Quarrying	0.999	0.999	0.999	0.999	0.999	0.999
C	Manufacturing	0.781	0.828	1.099	0.911	1.369	0.960
D	Electricity, Gas and Water	1.071	1.033	1.002	1.004	1.012	C
E	Construction	0.829	0.753	1.398	1.431	2.000	0.850
F	Trade, Hotels and Restaurants	1.033	0.993	0.951	1.185	0.934	1.033
F.1	Trade	1.059	1.035	0.964	1.198	0.900	1.030
F.2	Hotels and Restaurants	0.905	0.746	0.844	1.067	1.289	1.056
G	Transport and Communications	1.194	0.810	0.893	0.912	0.932	1.061
G.1	Transport	1.010	1.007	0.982	1.012	0.994	1.018
G.2	Communications	1.375	0.669	0.796	0.778	0.824	1.150
H	Finance and Real Estate	0.909	0.931	1.076	0.991	1.071	1.027
H.1	Banks	0.820	0.850	1.050	0.932	1.233	1.021
H.2	Insurance and Other Financial Intermediaries	1.075	1.328	1.093	1.098	0.938	1.016
H.3	Owner-occupied Dwellings	1.045	1.009	1.072	1.026	0.994	0.996
H.4	Other Real Estate	1.045	1.009	1.072	1.026	0.994	0.996
H.5	Business Services	0.878	0.830	1.356	1.092	0.662	1.420
I	Public Administration	0.991	1.006	1.012	0.996	1.067	1.015
J	Education	0.996	1.012	0.990	1.011	1.010	1.048
K	Health	1.013	0.993	1.004	1.025	1.094	1.024
L	Community and Personal Services	1.107	0.805	1.017	0.765	1.216	1.209
	less Bank Service Charge	0.931	0.711	0.819	0.871	1.135	1.202
	Taxes less Subsidies on Products	0.870	0.938	0.890	1.039	1.007	0.862
	GDP	0.985	0.961	1.033	1.049	1.116	0.977

Informal Sector - Households	1.039	1.003	1.068	1.024	1.006	1.003
Agriculture - crops	1.045	1.009	1.072	1.026	0.994	1.027
Agriculture - animals	1.045	1.009	1.072	1.026	0.994	0.996
Fishing	1.045	1.009	1.072	1.026	0.994	0.996
Mining	0.999	0.999	0.999	0.999	0.999	0.999
Manufacturing - Handicrafts	0.942	0.842	1.047	0.999	1.452	0.954
Construction - Own Account	0.999	0.999	0.999	0.999	0.999	0.999
Owner-occupied Dwellings	1.045	1.009	1.072	1.026	0.994	0.996
Other Real Estate	1.045	1.009	1.072	1.026	0.994	0.996
NPISH	1.056	0.910	0.982	0.803	1.216	1.179
Education	0.844	1.247	0.414	0.899	1.228	1.193
Health	1.487	0.830	1.121	1.663	1.135	1.273
Community and Personal Services	1.074	0.856	1.121	0.707	1.234	1.157
Government - SOES	0.979	0.811	0.975	0.912	1.132	1.017
Government - non-market	0.995	1.003	1.009	0.999	1.051	1.009
Taxes on Products less Imputed Bank Service Charge	0.810	1.192	0.938	1.137	0.950	0.679
Private Market Sector	0.947	0.907	1.115	1.281	1.366	0.940

Note: Growth rates calculated on unrounded values.

C = Confidential - Electricity, Gas and Water has been included with Construction

Table 5 Gross National Income, Gross National Disposable Income

Relations between Product, Income, Saving and Net Lending Aggregates	2004	2005	2006	2007	2008	2009
\$ 000						
GROSS DOMESTIC PRODUCT	29,399	28,674	30,584	32,457	37,292	35,758
Plus: Compensation of employees - from and to the rest of the world, net	3,799	3,616	2,865	2,708	3,734	3,075
Plus: Compensation of employees - from the rest of the world	4,022	3,859	3,138	2,920	3,902	3,149
Less: Compensation of employees - to the rest of the world	223	243	273	212	168	74
Plus: Property income – from and to the rest of the world, net	15,532	16,027	16,962	22,783	23,845	24,736
Plus: Property income – from the rest of the world. Investment Income	8,658	10,384	8,945	16,308	13,090	13,281
Plus: Property income – from the rest of the world. Fishing Rents	4,216	3,145	5,232	4,397	8,400	9,006
Plus: Property income – from the rest of the world. Other	3,249	3,132	3,474	2,828	3,000	3,153
Less: Property income – to the rest of the world	591	634	689	750	645	704
Equals: GROSS NATIONAL INCOME	48,730	48,317	50,411	57,948	64,871	63,569
Plus: Current transfers – from and to the rest of the world, net	9,335	8,047	10,125	9,568	9,279	13,450
Plus: Current transfers - from the rest of the world - official aid	9,060	7,761	11,090	10,792	10,854	14,655
Plus: Current transfers - from the rest of the world - other	1,487	1,674	1,015	1,057	1,113	1,051
Less: Current transfers – to the rest of the world	1,212	1,388	1,980	2,281	2,688	2,256
Equals: GROSS NATIONAL DISPOSABLE INCOME	58,065	56,364	60,536	67,516	74,150	77,019
Ratio - GNDI to GDP	2.0	2.0	2.0	2.1	2.0	2.2

Table 6 Implicit Price Indexes

		2004	2005	2006	2007	2008	2009
A	Agriculture, Forestry and Fishing	95	100	106	113	120	122
A.1	Crops	92	100	106	119	113	120
A.2	Animals	97	100	106	111	129	128
A.3	Forestry						
A.4	Fishing	96	100	105	110	120	118
B	Mining and Quarrying	99	100	99	100	102	99
C	Manufacturing	97	100	104	106	117	117
D	Electricity, Gas and Water	93	100	61	102	3	C
E	Construction	106	100	95	91	92	93
F	Trade, Hotels and Restaurants	99	100	142	139	144	97
F.1	Trade	97	100	145	139	152	98
F.2	Hotels and Restaurants	112	100	119	141	92	88
G	Transport and Communications	106	100	94	99	89	94
G.1	Transport	117	100	95	109	116	120
G.2	Communications	98	100	93	80	31	45
H	Finance and Real Estate	98	100	102	103	110	110
H.1	Banks	97	100	103	105	117	117
H.2	Insurance and Other Financial Intermediaries	97	100	104	106	117	117
H.3	Owner-occupied Dwellings	100	100	100	100	100	100
H.4	Other Real Estate	100	100	100	100	100	100
H.5	Business Services	97	100	104	106	117	117
I	Public Administration	100	100	103	102	102	109
J	Education	94	100	106	104	107	113
K	Health	101	100	101	104	92	89
L	Community and Personal Services	97	100	104	106	117	117
	less Bank Service Charge	97	100	104	106	117	117
	Taxes less Subsidies on Products	97	100	105	107	122	121
	GDP	99	100	103	104	107	106
	Compared with CPI All Groups	97	100	104	106	117	117

Note: Implicit price deflators are calculated on unrounded values.

C = Confidential - IPD not included for Electricity, Gas and Water

Table 7 Implicit Price Indexes Growth Rates

	2004	2005	2006	2007	2008	2009	
A	Agriculture, Forestry and Fishing	1.071	1.056	1.058	1.072	1.055	1.015
	A.1 Crops	1.110	1.084	1.063	1.116	0.950	1.067
	A.2 Animals	1.019	1.036	1.063	1.040	1.171	0.987
	A.3 Forestry						
	A.4 Fishing	1.072	1.041	1.050	1.045	1.097	0.984
B	Mining and Quarrying	1.040	1.006	0.989	1.010	1.025	0.968
C	Manufacturing	1.028	1.032	1.038	1.022	1.104	0.997
D	Electricity, Gas and Water	2.418	1.076 -	0.607	1.676	0.033	6.012
E	Construction	1.044	0.945	0.948	0.962	1.008	1.013
F	Trade, Hotels and Restaurants	1.055	1.011	1.425	0.978	1.036	0.668
	F.1 Trade	1.024	1.035	1.451	0.960	1.089	0.644
	F.2 Hotels and Restaurants	1.235	0.894	1.190	1.185	0.651	0.957
G	Transport and Communications	1.060	0.947	0.939	1.052	0.898	1.062
	G.1 Transport	1.171	0.858	0.949	1.152	1.061	1.037
	G.2 Communications	0.981	1.025	0.926	0.869	0.389	1.453
H	Finance and Real Estate	1.020	1.019	1.021	1.011	1.068	1.000
	H.1 Banks	1.028	1.032	1.035	1.019	1.111	0.997
	H.2 Insurance and Other Financial Intermediaries	1.028	1.032	1.038	1.022	1.104	0.997
	H.3 Owner-occupied Dwellings	1.000	1.000	1.000	1.000	1.000	1.000
	H.4 Other Real Estate	1.000	1.000	1.000	1.000	1.000	1.000
	H.5 Business Services						
I	Public Administration	1.036	1.004	1.027	0.988	1.009	1.066
J	Education	1.047	1.062	1.056	0.987	1.022	1.063
K	Health	1.120	0.994	1.007	1.033	0.886	0.964
L	Community and Personal Services	1.028	1.032	1.038	1.022	1.104	0.997
	less Bank Service Charge	1.028	1.032	1.038	1.022	1.104	0.997
	Taxes less Subsidies on Products	1.025	1.034	1.047	1.024	1.136	0.994
	GDP	1.056	1.015	1.032	1.011	1.030	0.982
	Compared with CPI All Groups	1.028	1.032	1.038	1.022	1.104	0.997

Note: Growth rates calculated on unrounded values.

C = Confidential - IPD not included for Electricity, Gas and Water

APPENDIX II. DOCUMENTATION ON NATIONAL ACCOUNTS METHODOLOGY
--

Part 1 – How to Update the Spreadsheets

(To be completed are Part 2 – Checking the Results for Sensibility, and Part 3 –Sources and Methods Document)

Data to Collect (use this as a check list):

	2006	2007	2008	2009	
CPI – quarterly data, at 2-digit level of classification.					
Central Government accounts, trial balance for most recent year(s) and audited accounts when available, at detailed account item level, by ministry and sub-head/department.					
Island Councils' accounts.					
TNPF employment data – wages and number of employees for every business operating in Tuvalu. Ideally want these data quarterly. Include hours worked if recorded by TNPF, or at least an indicator for the status of the employees, i.e., full time vs. part time, ongoing and permanent vs. temporary or short term/casual.					
Financial accounts of major enterprises –					
Electricity Corporation	Yes	Yes	Yes		
Tuvalu Telecom	Yes	Yes	Yes	Yes	
National Bank of Tuvalu (NBT)	Yes	Yes	Yes	Yes	
Tuvalu National Provident Fund (TNPF)	Yes	Yes	Yes	Yes	
Development Bank of Tuvalu (DBT)			Yes	Yes	
Vaiaku Lagi Hotel	Yes	Yes	Yes	Yes	
Tuvalu Maritime School					
Island Supermarket	Yes	Yes	Yes	Yes	
Tuvalu Cooperative Society (TCS)	Yes	Yes	Yes	Yes	
BP South West Pacific (BPSWP)	Yes	Yes	Yes		
Tax records for all businesses included in the tax register.					
Migration data – visitors and residents departing/arriving	Yes	Yes	Yes	Yes	
Resident births and deaths	Yes	Yes	Yes	Yes	
Balance of Payments – compensation of employees to and from the rest of the world, property income to and from the rest of the world (investment income, fishing rents, other property income), current transfers to and from the rest of the world (official aid, other). (for GNI and GNDI calculation)	Yes	Yes	Yes	Yes	

Enter Data into Spreadsheets:

Price Indexes/Deflators

“Tuvalu New CPI_Worksheet_2nd_Qtr09.xls”

1. In the sheet “Long Term Quarterly”, extend the series for each index and sub-index to the latest available quarter by linking the cells to the CPI 2-digit workbook (for 2010 this was workbook CPI-2.xlsx), sheet “Rebased Index 2”. This sheet provides a long term quarterly table of the CPI at the 2-digit level on the published May quarter 2006 base. Check to see that there were no revisions to the numbers for the last quarter in the table. Also check that the structure of the table is the same, i.e., no rows added or deleted. This table will need to be redeveloped when the CPI is rebased.
2. In the sheet “Long Term Annual”, extend the series for the latest year by copying the formulae. Be careful with these formulae – they calculate an average of four quarters and the cell references have to be changed by four columns in the “Long Term Quarterly” sheet. E.g., for meat, the formula for 2008 refers to cells AN147:AQ147 and for 2009 it should refer to AR147:AU147. (if the formula is simply copied across it will only move the cell references by one column not four which will create an error). This sheet provides a long term annual table of the CPI at the 2-digit level on the published May quarter 2006 base.
3. In the sheet “Annual index 2005=1000”, extend the series for the latest year by copying the formulae. This sheet provides a long term annual table of the CPI at the 2-digit level, re-expressed at the average prices of 2005, the constant price national accounts base year. Remember to extend the series for the goods deflator at the bottom of the sheet (row 94) (used for import duties).
4. In the GDP Summary.xls workbook, sheet “Deflators for NPF Industries”, extend the formulae to the latest year. For all but one of the industry deflators, the formulae link directly to the “Tuvalu New CPI_Workbook.xls” spreadsheet. The exception is the deflator for the Works Department which is derived in the Government workbook – refer below.

Major Business’s Spreadsheets

1. Electricity Corporation. “Electricity Corp.xls”. From the audited or other financial accounts enter the income and expense items into the sheet “Audit Report 2006” in the appropriate rows. Note that accounts generally present two years in one report – check that the previous year’s values are unchanged from the previous version of the spreadsheet (if there are differences, try to understand why the numbers have changed, i.e., check that the item has not simply been called something else compared with the previous year). Check also that all items of income and expense in the accounts are included in the spreadsheet – there could be items presented in the accounts and these must be classified to the appropriate national accounts item (intermediate consumption, gross output, compensation of employees, depreciation, indirect taxes less subsidies). It will be necessary to refer to the notes to the accounts as well as the income statement. In the sheet “Generation” enter the value and volume of electricity generated from the regular collection of these data. In the “Summary” sheet, extend the calculations for the latest years by copying the formulae across. For years beyond the last year accounts are available for, estimate the components individually in the “Summary” sheet, using any available information – if no information available then have to make a simple guess. Similarly, if the generation data are not available make an estimate, based on anecdotal or any other information available.

- a. Note 1: value added may be negative, for example, if the electricity price is fixed and the price of fuel purchased for generation goes up. Operating surplus is the residual item in the production account and could be negative if the current expenses (int cons, COE, depn, ind taxes less subsidies) are higher than gross output. Value added is calculated as gross output minus intermediate consumption.
 - b. Note 2: the line “Indirect taxes less subsidies” is the subsidy paid to the Electricity Corp by the Government, called “Government Grants” in the accounts. This is entered as a negative value (subsidies supplement income to the Corporation but are recorded on the expense side of the production account).
 - c. Note 3: try to record the data for stock change and gross fixed capital formation – these data are not used in the GDP calculations but will be useful for future development of expenditure measure of GDP. Also, large capital expenditure should be traced back to imports of equipment, e.g., generators, or to overseas grants if provided by a foreign government – this should also be checked against capital grants in the BOP statements.
2. Tuvalu Telecom. “Telecom Corp.xls”. As for Electricity Corp, enter the accounts data into the sheet “Audit 2003 & Workings”. Extend formulae and perform same checks as for Electricity Corp. Ignore the last sheet “BOP components” as these data are not used. Make estimates for latest year if no accounts available. Use any anecdotal information available.
 3. National Bank of Tuvalu (NBT). “National Bank.xls”. As for Electricity Corporation, update the sheet “Audit 2006 & workings” with data from the accounts. Extend formulae and perform same checks. Enter the data for interest income and interest expense, foreign exchange income, non-risk fees and other income on the “Summary” sheet – these data are used to estimate gross output as well as the bank service charge.
 4. Tuvalu National Provident Fund (TNPF). “Tuvalu Provident Fund.xls”. As for Electricity Corp. Enter data into sheet “Data entry from Audits&workings”. TNPF is being treated as if it were a non-market producer, with value added being estimated as the sum of Compensation of Employees and Depreciation, i.e., zero operating surplus. The TNPF is a market producer in fact, but any surplus would be reinvested into the fund. This is an approximation to the correct treatment which would calculate a service charge for output, but it is considered too complicated to calculate the correct way and it is likely to result in a similar value. Extend the formulae in the “Summary” sheet and do usual checks.
 5. Development Bank of Tuvalu (DBT). “Development Bank.xls”. DBT is calculated in the same way as for TNPF, i.e., as if it were a non-market producer. Note, the latest accounts available during the July 2009 NA estimation were for 2005.
 6. Vaiaku Lagi Hotel. “Vaiaku Lagi Hotel.xls”. Enter data into the “VLH” sheet, extend the formulae, check results, etc. Check the link is updated to the number of tourists data in the “Population households estimates.xls” workbook and that has been updated. Note that this account has been calculated as for a retailer which is incorrect, i.e., much of its output is derived from reselling goods – the hotel does not resell goods in the same condition as they were purchased, rather it converts food and alcohol into meals and on premise drinks, different products. Therefore the output should be the gross value of sales and intermediate consumption should include the cost of goods purchased for resale (COGS). As this does not affect value added, the

methodology is retained as is. Note also that the calculation of the production account is done in the columns J to M, using a SUMIF function. Be careful when copying the formulae.

7. Tuvalu Maritime School. "Tuvalu Maritime School.xls". A workbook is set up for this enterprise but no accounts have been obtained since 2004. If accounts can be obtained it should be calculated in the same way as for the other major enterprises above.
8. BP South West Pacific (BPSWP), Tuvalu Cooperative Society (TCS), Island Supermarket. "TCS_BP_Island Supermarket.xls". These three large enterprises are calculated in the same workbook, based on data obtained from the tax records (a workbook for each year, e.g., "2008 Business Accounts.xls"). Their data are entered into the business accounts workbook and to update their estimates in this workbook, extend the formulae and check that they update correctly and that they look sensible.

Migration and Births and Deaths.

"Population households estimates.xls".

In sheet "Migration", enter the number of visitor and resident arrivals and departures.

In sheet "Population estimates", enter the number of births and deaths data.

In 2010 these data were obtained from the workbook "Current population estimates 4th quarter.xls", prepared by CSD with UNFPA, with Geoffrey Hayes – these data were also used by the BOP mission in June/July 2010.

Extend the formulae for the latest year. Note that the number of households used in the GDP calculations is an annual average, taken as the average of the end of year number of households initially calculated.

APPENDIX III. BALANCE OF PAYMENTS STATISTICS

Note, only the revised tables are included.

Table 1: Balance of Payments Summary AUD thousand

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Current account									
Goods credit	400	426	444	410	441	555	479	647	611
Goods debit	32,365	14,264	8,681	13,706	14,009	12,825	14,351	20,406	16,300
Goods balance	-31,965	-13,838	-8,237	-13,296	-13,568	-12,270	-13,872	-19,759	-15,689
Services credit	2,145	2,677	2,737	3,149	2,438	2,679	2,361	2,968	2,853
Services debit	17,219	25,656	22,906	13,180	12,439	14,352	26,042	20,187	17,223
Services balance	-15,073	-22,979	-20,169	-10,031	-10,001	-11,673	-23,681	-17,219	-14,369
Goods and services balance	-47,038	-36,817	-28,406	-23,327	-23,569	-23,943	-37,553	-36,978	-30,058
Primary income credit	19,981	28,917	13,927	20,146	20,520	20,788	26,453	28,392	28,589
Primary income debit	770	594	684	814	877	962	962	813	778
Primary income balance	19,211	28,323	13,243	19,331	19,643	19,826	25,491	27,579	27,810
Secondary income credit	7,163	8,692	9,946	10,547	9,435	12,105	11,849	11,967	15,706
Secondary income debit	1,492	1,152	1,036	1,212	1,388	1,980	2,281	2,688	2,256
Secondary income balance	5,671	7,540	8,911	9,336	8,047	10,125	9,568	9,279	13,450
<i>Current Account Balance</i>	-22,156	-954	-6,253	5,340	4,121	6,008	-2,494	-120	11,202
Capital account									
Capital transactions credit	16,328	13,431	11,320	1,181	2,509	3,559	12,728	6,120	4,303
Capital transactions debit	0	0	0	0	0	0	0	0	800
Capital Account Balance	16,328	13,431	11,320	1,181	2,509	3,559	12,728	6,120	4,303
<i>Net lending/borrowing (Current+Capital Accounts balances)</i>	-5,828	12,477	5,067	6,521	6,630	9,567	10,234	6,000	15,505
Financial Account									
Net incurrence of assets	-9,331	2,479	-5,970	10,267	8,946	9,052	8,156	15,863	13,080
Net incurrence of liabilities	-18	-18	-17	-16	-15	-14	548	214	-1,667
<i>Net lending/borrowing (Financial account)</i>	-9,313	2,497	-5,953	10,283	8,961	9,066	7,608	15,649	14,747
<i>Net errors and omissions</i>	3,485	9,980	11,021	-3,761	-2,330	501	2,626	-9,649	758

APPENDIX IV. DATA TEMPLATE FOR TRADE DATA FOR BALANCE OF PAYMENTS
--

The following template provides data specifications for CSD to extract the **monthly** trade data required for BOP purposes. Data should be provided in spreadsheet format, with data items (in columns) for exports and imports and detailed HS commodity values (in rows).

Note that the Customs concession codes below are indicative – the appropriate Tuvalu Customs codes need to be added.

Exports

Data Item	Level of Aggregation	Customs concession code	BPM6 Treatment
Total exports f.o.b.	Detailed HS commodity	n.a.	Included after adjusting for the following:
Exports by Tuvalu Government to embassies and peace-keeping forces abroad and personal effects of Samoan diplomats exported.	Detailed HS commodity	Government export code.	Excluded. Resident/ resident transactions.
Grant (in-kind) exports by Tuvalu Government	Detailed HS commodity	Government export code.	Included. Used to derive offset entries for current and capital transfers.
Re-exports by foreign consulates and embassies and foreign diplomats' personal effects re-exported.	Detailed HS commodity	Codes 100 and 103.	Excluded. Non-resident/ non-resident transactions.
Re-exports by international and regional institutions, foreign aid organizations and staff personal effects re-exported.	Detailed HS commodity	Codes 101 and 102. Also codes 105 and 106 (if no duty paid).	Excluded. Non-resident/ non-resident transactions. Note: Only aid organizations and staff with diplomatic immunities should be excluded.
Immigrants' personal and other household effects.	Total household effects	Code 111	Excluded. Includes new Tuvalu residents and Tuvalu citizens returning permanently.
Re-export with no ownership change.	Yachts	Code 112	Excluded.
Goods procured in port by non-resident carriers.	Detailed HS commodity	Code ZZZ	Included.
Goods sent for repair	Detailed HS commodity	Codes RET and REP	Exclude. This is the value of the goods sent for repairs.
Export of non-monetary gold	Gold	n.a.	Included. Shown separately.
Transit trade/trans shipment	All goods exported that did not cross the Customs boundary into the domestic market AND where no change of ownership took place between a resident and non-resident.	n.a.	Excluded.

Imports

Data Item	Level of Aggregation	Customs concession code	BPM6 Treatment
Total imports c.i.f.	Detailed HS commodity	n.a.	Used to derive c.i.f./f.o.b. difference to measure freight and insurance debits.
Total imports f.o.b.	Detailed HS commodity	n.a.	Included after adjusting for the following:
Re-imports by Tuvalu Government from embassies and peace-keeping forces abroad and personal effects of returning Tuvalu diplomats.	Detailed HS commodity, both c.i.f. and f.o.b.	Government import code.	Excluded. Resident/ resident transactions.
Imports by foreign consulates and embassies and foreign diplomats' personal effects imported.	Detailed HS commodity	Codes 100 and 103.	Excluded. Non-resident/ non-resident transactions.
Imports by international and regional institutions, foreign aid organizations and staff personal effects re-exported.	Detailed HS commodity	Codes 101 and 102. Also codes 105 and 106 (if no duty paid).	Excluded. Non-resident/ non-resident transactions. Note: Only aid organizations and staff with diplomatic immunities should be excluded.
Immigrants' personal and other household effects.	Total household effects	Code 111	Excluded. Includes new Tuvalu residents and Tuvalu citizens returning permanently.
Re-export with no ownership change.	Yachts	Code 112	Excluded.
Gifts, grants and other transfers in-kind to NGOs, religious and charitable organizations.	Detailed HS commodity	Codes 116 and 117	Included. Used to derive offset entries for current and capital transfers to NPISH.
Return of goods after repair	Detailed HS commodity	Codes RET and REP	Exclude. This is the value of the returned goods sent for repairs.
Import of non-monetary gold	Gold	n.a.	Included. Shown separately.
Transit trade/trans shipment	All goods landed but not crossing the Customs boundary into the domestic market AND where no change of ownership takes place between a non-resident and a resident.	n.a.	Excluded.