

Components of the Income Aggregate: “Living Standards Survey, Nepal 2003”¹

Prepared for the Rural Income Generating Activities (RIGA) Project²

of the Agricultural Development Economics Division,

Food and Agriculture Organization

December, 2008

This document provides the survey-specific details associated with the income aggregate construction. For more information about the RIGA project, please refer to <http://www.fao.org/es/esa/riga>. For additional detail regarding the overall RIGA income aggregate construction approach, please refer to Carletto, et al (2007), “Rural Income Generating Activities Study: Methodological note on the construction of income aggregates,” found on the RIGA website.

The Nepal Living Standards Survey II was administered from April 2003 to April 2004 as a follow up to the first NLSS of 1995/96. The second round of NLSS (NLSS II) was originally scheduled for 2002/03 and conducted a year later during 2003/04. A two-stage stratified sample procedure was used to select the sample frame. The sample frame was drawn from the 2001 Population Census of Nepal.

The sample for the NLSS II was originally set at 4008 households from 334 PSUs with 12 households in each of the PSUs. However, only 3912 households from 326 Primary Sampling Units (PSU) actually completed the survey. In addition, to these cross-sectional households, NLSS II interviewed additional 1160 households from 95 panel PSUs. **THE INCOME AGGREGATE IS BASED ON THE CROSS-SECTIONAL HOUSEHOLD DATA.**

There are 229 rural PSUs (2,748 rural households) and 97 urban PSUs (1,164 urban households) in the dataset. In the original datasets, *urbrrural* is the variable distinguishing urban from rural households. The definitions for “urban” for the 1981 and 1991 Census was: Localities with 9000 inhabitants or more.³ In the calculation of the income aggregate, *urbrrural* is renamed to **URBAN** in order to use the same variable name across different surveys.

¹ The information provided in this document relies substantially upon the Nepal Living Standards Survey – Statistical Report Volume I and Volume II, published by the National Bureau of Statistics.

² The RIGA Project is a collaboration between FAO, the World Bank and American University in Washington, D.C. Original data can be obtained from the World Bank’s Living Standards Measurement Study by visiting the LSMS website at: <http://www.worldbank.org/lsm>.

³ Source: <http://157.62.21.4/SHARE1/UN%20Demographics/technote/english/notes/table02.htm> (United Nations Demographic Yearbook-Historical Supplement 1st issue, DYB-CD, data from 1948 to 1997).

All money amounts are in the local currency, Nepali Rupees. In 2003, the official exchange rate was 79.13 Rupee = 1.0 USD.⁴ The income aggregates are calculated at the household level and all aggregates are annualized.

The various household-level modules of the NLSS survey can be linked using the unique household identifier variable: WWWHH. This variable is renamed to HH in the final income aggregate file to provide for consistency across countries within the study.

Regarding income from different sources, revenues and costs were disaggregated when such information was available. The disaggregated sources for each income component are summarized in output variables column of Table 1. The net variables and the data files included in the final total income aggregate (Income.dta) are in **bold**. **Unless otherwise noted, all variables included in the aggregate income variable are net of costs.**

Comments

- In all sections, the raw data undergoes a transformation (it is annualized, aggregated, taken from person – household level, etc) before a check for outliers takes place.
- In the Crop Production section, the reference period is the previous 12 months. Two total crop income variables are created: *cropincome1* and *cropincome2*. *Cropincome1* includes estimates of own crop consumption based on the agricultural production module of the household questionnaire. *Cropincome2* includes estimates of own crop consumption based on the food expenditure section of the questionnaire in which household consumption was recorded and updated periodically over a given time frame.
- The reference period for the consumption of own produce (from the food expenditure section of the questionnaire, corresponding to *Cropincome2*) is based on the last month.
- For the Livestock and Rentagric and Transfers sections, the reference period is the previous 12 months.
- Rentagric calculates gross and net income from the rented and sharecropped agricultural land. Although both are calculated, the income aggregate only includes the gross estimate.
- In the Wage employment section, the reference period is daily, weekly and monthly. All household members 10 years and older were interviewed.
- The classification of wage employment activities into industries and skilled/unskilled categories follow the United Nations International Standard Classification of Occupations (ISCO) 88 codes. Given these standards, the employment sectors include: (1) Agriculture, Livestock, Hunting and Fishing, (2) Mining, (3) Manufacturing, (4) Electricity and Utilities, (5) Construction, (6) Commerce, (7) Transportation, Storage and Communications, (8) Finance, Insurance and Real Estate, (9) Services and (10) Other Industries. The job categories are divided into skilled, unskilled and other.
- Earnings from wage employment include all in-cash and in-kind benefits in cash received from the employer.
- The Self Employment section accounted for income from non-farm enterprises owned by the household. The reference period is the last 12 months or the duration that the enterprise has been in business in the last 12 months.
- The classification of non-farm enterprise activities into industries categories also follows the ISCO-88 codes. Given these standards, the non-farm enterprise sectors include: (1)

⁴ Exchange rate used comes from the World Bank World Development Indicators database.

Agriculture, Livestock, Hunting and Fishing, (2) Mining, (3) Manufacturing, (4) Electricity and Utilities, (5) Construction, (6) Commerce, (7) Transportation, Storage and Communications, (8) Finance, Insurance and Real Estate, (9) Services and (10) Other Industries.

- For all sections, whenever information was available regarding the share of a business, enterprise, or any other income activity owned by the household, the income earned from that activity was weighted by the share owned by the household.

The programs that calculate each household's income aggregate component are summarized in Table 1. Tables 2 and 3 summarize the results from the created income aggregate. This table can also be viewed, with the individual components disaggregated, in Microsoft Excel from the file Income.xls.

Table 1**Nepal 2003**

Total HH Obs: 5071

Total Rural HH Obs: 3655

do file	input dta files	output dta files	output variables
Sample.do	sample04.dta	Sample.dta	
prices.dta	agri_b.dta Z11E1B.dta Z05A.dta Sample.dta	prices.dta	pricedata1 pricedata2 pricedata3 pricedata4 pricedata5 pricedata6 pricedata7 pricedata8
Food.do	Z05a.dta prices.dta Sample.dta	Fooddown.dta Food.dta	foodpurchimp fooddownimp foodnonpurchimp fooddowncrop fooddownlivstock
Rentagric1.do Rentagric2.do	Z11A2A.dta Z11A2B.dta Z11A1A.dta Z11A1B.dta Z11A1C.dta Sample.dta	aggrentexp.dta agrrentinc.dta Rentagric.dta Rentagricnet.dta	farmrntexpimp shrcropexpimp farmrntincimp shrcropincimp farmrntimp
Cropincome1.do	Z11D.dta	otherfarminc.dta	otherfarmincimp

Cropincome2.do	Z11C1B.dta	seedexp.dta	otherfarmexpimp
Cropincome3.do	Z11C2B.dta	laborex.dta	seedexpimp
	Z11C3C.dta	<i>cropexp.dta</i>	chfertexpimp
	cropinc.dta	<i>cropinc.dta</i>	laboreximp
	agri_b.dta	<i>cropbypr.dta</i>	cropexpimp
	Foodown.dta	Cropincome.dta	cropsoldimp
	Sample.dta		croplordimp
	agrrentinc.dta		cropown1imp
	agrrentexp.dta		cropbyprimp
			cropincome1imp
			cropincome2imp
Employment.do	Z10A1.dta	employ1.dta	wge (by industry, skilled)
	<u>Z10A2.dta</u>	employ2.dta	wgem
	Z10B1.dta	employ3.dta	wgeimp
	Z10B2.dta	employ4.dta	wgeimp1_1
	Sample.dta	employ5.dta	wgeimp2_1
		employ6.dta	wgeimp3_1
		Employment.dta	wgeimp4_1
			wgeimp5_1
			wgeimp6_1
			wgeimp7_1
			wgeimp8_1
			wgeimp9_1
			wgeimp10_1
			wgeimp1_2
			wgeimp2_2
			wgeimp3_2
			wgeimp4_2
			wgeimp5_2
			wgeimp6_2
			wgeimp7_2
			wgeimp8_2
			wgeimp9_2
			wgeimp10_2

Livestock.do	Z11E1A.dta Z11E1B.dta Foodown.dta Sample.dta Z11E2.dta	livstinc.dta livstexp.dta Livestock.dta	livstsoldimp livstbyprsoldimp livstinptimp livstincimp
Selfemp.do	Z12A1.dta Z12A2.dta Z12B.dta Sample.dta	Selfemp.dta	selfimp1 selfimp2 selfimp3 selfimp4 selfimp5 selfimp6 selfimp7 selfimp8 selfimp9 selfimp10
Otherincome.do	Z15.dta Z13C.dta Sample.dta	otherinc1.dta otherinc2.dta Otherincome.dta	otherinc1imp nonfarmrntimp assetrentimp otherinc
Transfers.do	Z14A1.dta Z14A2.dta Z14B1.dta Z14B2.dta Z15.dta	transferprivexp.dta transferprivinc.dta pensions.dta transpriv.dta Transfers.dta	d_cash12imp ikprivtransincimp ikprivtransexpimp d_sent12imp transprivimp transprivincimp pensionsimp pubtrans pensions privtrans transfersgrossimp transferstotimp

Table 2

Nepal 2003		3610 Rural HH Observations		Rural, Weighted, Rupees				Rural, Weighted, USD	
<i>Variable</i>		<i># Participants</i>	<i>Participation Rate</i>	<i>Returns to Participation- Participant HHs</i>	<i>Returns to Participation- All HHs</i>	<i>Share of Total Income- All HHs (Mean of Shares)</i>	<i>Share of Total Income- All HHs (Share of Means)</i>	<i>Returns to Participation- Participant HHs</i>	<i>All HHs</i>
agr_wge	Wage Employment- Agriculture	1,361	38.22%	10,148	3,879	11.69%	7.72%	128	49
nonagr_wge	Wage Employment- Nonfarm	1,338	35.96%	39,674	14,268	19.20%	28.38%	501	180
crop1	Crop Production	3246	89.44%	16,604	14,851	29.36%	29.54%	210	188
livestock	Livestock Production	3132	86.23%	9,073	7,824	14.71%	15.56%	115	99
selfemp	Non-ag Self Employment	801	0.00%	28,457	6,051	8.43%	12.04%	360	76
transfer	Total Transfers	1334	21.26%	24,469	9,383	14.61%	18.66%	309	119
other	Other Income Sources	954	27.38%	5,542	111	2.00%	0.22%	70	1
totincome1	Total Household Income-crop2	3609	99.94%	57,806	50,274	100.00%	112.12%	731	635

Percent Rural (Weighted)	87.30%
Rupee/USD July 26, 1996	79.13

Notes:

1. Source data: 2003 Living Standards Survey (NLSS).
2. Exchange rate used comes from the World Bank *World Development Indicators* database.
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons equals total harvest minus crop sold, crop allocated for sharecropping expenditure, and crop allocated for seed, fodder and by products. For crop2, owncons is calculated from the "Consumption of Own Produce" section of the household questionnaire. Total household income "totincome1" and "totincome2" are therefore calculated with the corresponding crop income variable.
4. All values reported are annual and net of costs (with the exception of income from transfers and land rent, which are gross receipts).

Table 3

<i>Nepal 2003</i>		3610 Rural HH Observations		Rural, Weighted, Rupees				Rural, Weighted, USD	
<i>Variable</i>		<i># Participants</i>	<i>Participation Rate</i>	<i>Returns to Participation- Participant HHs</i>	<i>Returns to Participation- All HHs</i>	<i>Share of Total Income- All HHs (Mean of Shares)</i>	<i>Share of Total Income- All HHs (Share of Means)</i>	<i>Returns to Participation- Participant HHs</i>	<i>All HHs</i>
agr_wge	Wage Employment- Agriculture	1,361	38.22%	10,148	3,879	12.64%	7.72%	49	49
nonagr_wge	Wage Employment- Nonfarm	1,338	35.96%	39,674	14,268	21.06%	28.38%	180	180
crop2	Crop Production	3374	93.40%	7,872	7,352	20.31%	14.62%	93	93
livestock	Livestock Production	3132	86.23%	9,073	7,824	17.65%	15.56%	99	99
selfemp	Non-ag Self Employment	801	0.00%	28,457	6,051	9.15%	12.04%	76	76
transfer	Total Transfers	1334	21.26%	24,469	9,383	16.79%	18.66%	119	119
other	Other Income Sources	954	27.38%	5,542	111	2.39%	0.22%	1	1
totincome2	Total Household Income-crop2	3609	99.94%	50,303	50,274	100.00%	97.20%	635	635

Percent Rural (Weighted)	87.30%
Rupee/USD July 26, 1996	79.13

Notes:

1. Source data: 2003 Living Standards Survey (NLSS).
2. Exchange rate used comes from the World Bank *World Development Indicators* database.
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons equals total harvest minus crop sold, crop allocated for sharecropping expenditure, and crop allocated for seed, fodder and by products. For crop2, owncons is calculated from the "Consumption of Own Produce" section of the household questionnaire. Total household income "totincome1" and "totincome2" are therefore calculated with the corresponding crop income variable.
4. All values reported are annual and net of costs (with the exception of income from transfers and land rent, which are gross receipts).