

# HIES Data Processing Instructions

## 1. Application Files

The data entry applications have been developed with CSPRO 3.0. There are 3 separate data entry applications corresponding to the 3 HIES questionnaires (HCF + Income questionnaire are processed together).

1. HIES 2006 Incomex
2. HIES 2006 Expenditure
3. HIES 2006 Diary

Each application comprises three modules: a data dictionary, a forms file, and an application file. The data dictionary specifies all records and fields in the data file as well as the value ranges. The forms file specifies the layout and order of the data entry forms. The application file specifies the editing logic, including skips, lookup lists, nil and large values, and consistency checks.

The applications are stored on the data entry PCs in the folder: c:\HIES\DEAPP. The applications are selected via the HIES .pff icon on each PC. Each PC will have a different icon depending on the type of questionnaire being processed.

## 2. Data Files

Before data entry the default data file is replaced with the filename of the current batch, where each EA is a batch. Use the following filename templates 'QQeano.dat' where QQ = questionnaire type, eano = EA.number.

e.g	IN0101.dat	Incomex
	EX0101.dat	Expenditure
	DY0101.dat	Diaries

The data files are stored on the data entry PCs in c:\HIES\DEAPP\DATA folder.

## 3. Coding Operations

The HIES field staff are responsible for the coding of the household diaries which need to be coded according to the item code list. The coding of the diaries need to be completed for each batch before sending to the data entry operators.

For missing amounts for expenditure items listed in the diaries an estimate needs to be made of the costs of item. Refer to other diaries in the batch to estimate the local cost of the item. Enter the estimated cost in red pen.

For large expenditure items listed in the diaries a check should be made to ensure that the items are captured in the expenditure questionnaire. If not they should be added.

As the other questionnaires are mostly pre-coded, the data entry supervisor will code the income and expenditure questionnaires (especially for occupation & industry).

The data entry supervisor separates the batches into the three questionnaire types for data entry, and then returns them to their original envelopes for storage after the structural checks have been performed.

#### **4. Data Entry operations**

The data entry supervisor is responsible for ensuring the data is entered into the system according to the instructions in the HIES data entry manual. The data entry operators will be trained by the supervisor to follow the data entry procedures, including the re-checking of entered data. The operators are supervised during data entry operations and issues raised by them dealt with by the supervisor promptly.

As there more than 500 households to be processed over a period of two months, each operator is to complete a minimum of 10 households per day. Each batch should be completed before the operator takes a tea/lunch break or finishes for the day. The supervisor should monitor the work of the operators and take action to ensure the timetable is maintained.

To assess the level of accuracy during data entry, every tenth batch should be verified by re-entering the batch again preferably by a different operator. The batch should be named with a .ver suffix to distinguish it from the original file. The original and verified batches should be compared and a mismatch statistic produced and recorded.

#### **5. Data Verification operations**

After each batch is completed, the supervisor copies the data files onto the master PC in the folder c:\HIES\DEAPP\DATA. This will ensure there are two copies of each batch: ie on data entry PC and on master PC.

For each batch, the supervisor performs a structural check by reviewing the file tree to ensure that all questionnaires have been entered and checked off on the household listing. If the numbers of households on the listing disagree with numbers entered, then the differences are resolved by either adding/deleting households from the system or amending the household listing.

If commodity items are not found in the item codes listing then the supervisor adds the code and description to the itemcodes.dat file by accessing the "itemcodes.ent" application on the data entry and master PCs. Any false errors should be reported to the developer for amendment.

## **5. Data Editing operations**

After each batch is completed the supervisor should check that all person details have been entered from the household listing form (HCF) and should review the income and expenditure questionnaires for each batch ensuring that all items have been entered correctly. Any omitted or incorrect items should be entered into the system.

The supervisor is required to perform outlier checks (large or small values) on the batched diary data by calculating unit price (amount/quantity) and comparing prices for each item. This is to be conducted by loading the data into Excel files and sorting data by unit price for each item. Any changes to prices or quantities will be made on the batch file.

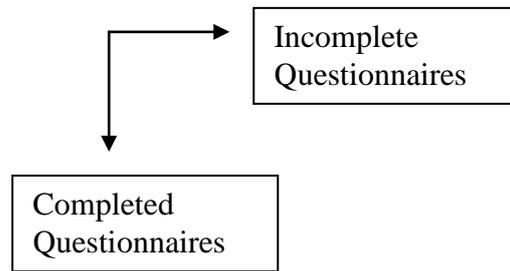
## **6. Data Auditing operations**

A list of all EAs should be maintained by the data entry supervisor and checked off once all households in the EA have been entered. The list should contain information on the number of households entered by EA. Any missing or incomplete questionnaires should be recorded. The number of entered households in each EA should be reconciled with the field listing.

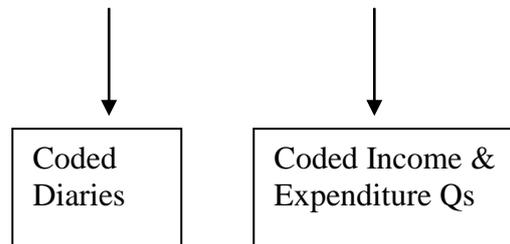
If there are missing questionnaires or incomplete responses an attempt should be made to contact the field supervisor to obtain the questionnaires or responses. Also any problems raised during the data entry operations should be referred to the field supervisor if the responses are considered to be incorrect or invalid.

## HIES Data Processing Work Flow

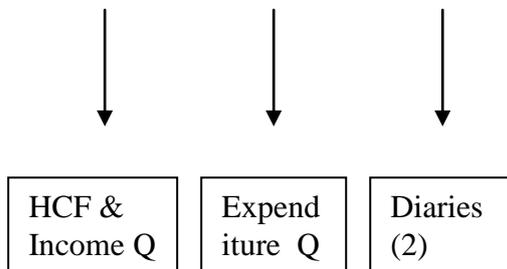
1. EA batch checked for completion by **field operations staff**



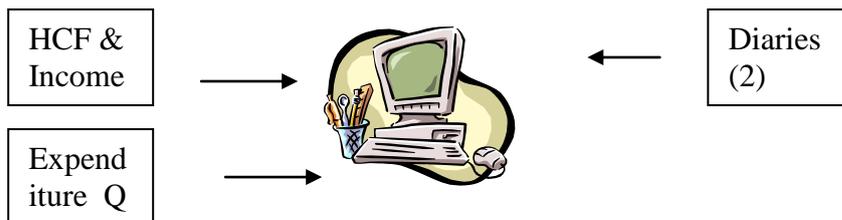
2. Coding and editing of completed questionnaires by **DP Supervisor and coders**



3. Coded questionnaires for each batch separated and provided to **DP operators** for data entry



4. Completion check of entered batches by **DP Supervisor**



5. EA batch returned to field operations staff