COUNTRY PRACTICE
IN ENERGY STATISTICS

Topic/Statistics: Energy Balance

Institution/Organization: Palestinian Central Bureau of Statistics (PCBS)

Country: Palestinian Authority

Date: 28/02/2012

CONTENTS

Abstract

Write a short abstract of the statistics, and try to limit it to one page. The purpose of the abstract is to give the reader a general overview of the statistics/topic. It should therefore include a brief overview of the background and the purpose of the statistics, the population, the sample (if relevant), the main data sources, and the main users of the statistics. The abstract should also mention what is the most important contribution or issue addressed in the country practice (e.g. the practice deals with challenges of using administrative data, using of estimation, quality control, etc.). If there are other elements that are considered important, please feel free to include them in the abstract.

Keep in mind that all relevant aspects of the statistical production will be covered in more detail under the different chapters in the template. Therefore, the abstract should be short and focused on the key elements. What the most important elements are can vary from statistics to statistics, but as a help to write an abstract you can use the table below. The table can either replace a text or can be filled out in addition to writing a short text.

Key elements	
Name of the statistics	Energy Balance
Background and purpose of the statistics	The main purpose of the energy balance is to show (in one table) the overall picture of energy production, conversion and consumption for each fuel utilized in the country.
Population, sample and data sources	The data of the energy balance are based on the administrative records and the data extracted from surveys conducted by the PCBS.
Main users	Researchers, public users, policy makers and international agencies such as UNSD & ESCWA
Important contribution or issue addressed	- Covering energy production, conversion and consumption for each fuel in different sectors in one table. - Providing necessary data for research and analysis purposes. - Providing necessary data for policy makers and interested persons in the energy field.
Other remarks	

1. General information

1.1. Name of the statistics/topic

The statistics/topic could either be a specific energy statistics (e.g. electricity production) or a topic within energy statistics (e.g. energy balances). For more information, please see Section III of the Instructions.

Energy Balance

1.2. History and purpose

State when the statistics were first published.

Started in 2004 and done for the years 2001-2010.

Describe briefly the main purpose of producing the statistics and why it is relevant.

To have a full overview of the whole energy situation n the Palestinian Territory through knowing the production, imports, exports and the consumption in each sector; the energy balance is a source to calculate the energy efficiency indicators and the CO_2 emissions.

1.3. Reference period

State the time period the data are collected for.

One year

1.4. Frequency

Specify how often the statistics are disseminated (e.g. annually, monthly, quarterly, etc.). If the statistics are not produced at regular intervals, state at what times they have been produced in the past and the main reasons behind the irregularities.

Annually

1.5. Dissemination

Describe how the statistics are published (e.g. printed publications, online publications, online databases, etc.). If applicable, include the web address to the main website of the statistics.

Online publications

1.6. Regional level

State the lowest geographical level (e.g. administrative regions, municipalities, etc.) for which the statistics are made available to the public.

The Palestinian Territory

1.7. Main users

Identify the key users of the data and the main applications. Include both internal and external users, and if possible try to distinguish between end users and others.

Researchers, Public users, Policy makers and international agencies such as UNSD & ESCWA

1.8. Responsible authority

Write the name of the institution and department/office with the main responsibility for disseminating the statistics (e.g.: Statistics Norway, Department of Economics, Energy and the Environment).

PCBS, Area Statistics Directorate, Natural Resources Statistics Department, Energy Statistics division

1.9. Legal basis and legally binding commitments

State the national legal basis for the data collection. Include a complete reference to the constitutional basis, and web address to an electronic version (e.g.: The Statistics Act of 16 June 1989 No. 54, §§2-2 and 2-3, http://www.ssb.no/english/about_ssb/statlaw/forskrift_en.html).

General Statistics Law No. (5) for year 2000,
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=3539&lang=en

If the data collection is not based on a legal basis, give a short description of other agreements or volunteer arrangements.

Irrelevant

If applicable, give reference to national and international commitments that are legally binding (e.g. EU statistical legal acts).

National: Memorandum of understanding with the General Petroleum Corporation.

1.10. Resource requirements

Specify how the production of the statistics is financed (e.g. over the ordinary budget, project based support, financial support from other institutions or organization). If applicable, state the contracting entity (e.g.: Ministry, EU Commission, OECD). A contracting entity is any entity which is ordering a survey or the compilation of a statistics, and paying for it

It's funded by the Palestinian Authority and the Core Funding Group (CFG) represented by the Representative Office of Norway to PNA and the Swiss Development and Cooperation Agency (SDC).

Specify the resource requirements for producing the statistics (e.g. man-labour days, number of workers involved in the statistical production process of the statistics/topic in question).

Around 30 working days for the producer of the energy balance. We depend on many resources collecting the data of the balance and many workers are involved in these resources.

1.11. International reporting

List any international organizations and names of reporting schemes that the statistics are reported to. If available, also include the website where the reported data are published (e.g. International Energy Agency, Monthly Oil Statistics, UNSD, etc.).

UNSD, ESCWA, MEDSTAT
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=1&lang=en

2. Statistical concepts, methodology, variables and classifications

2.1. Scope

Describe the scope of the statistics (e.g. the statistics cover supply and use of all energy products in Norway, classified according to International Standard Industrial Classification of All Economic Activities – ISIC).

The statistics cover supply and use based on the IRES.

2.2. Definitions of main concepts and variables

Describe the main concepts (e.g.: territory principle, resident principle, net calorific value, gross calorific value).

They are defined as in IRES

Describe the main variables (e.g. how are the different energy products defined in the statistics? How are production, intermediate consumption, final consumption, transformation, feed stock, the energy sector, etc. defined?).

They are defined as in IRES.

2.3. Measurement units

Describe in what unit the data is collected (e.g. physical unit (m3, metric tons), monetary unit (basic prices, market prices)). Describe in what unit the data is presented. Describe if the calorific values are collected (e.g. on a net vs. gross basis) and how they are used.

If applicable, describe the density of the energy product(s) and the estimated *thermal efficiency coefficients* of different energy products and consumer groups or by appliance. Thermal efficiency coefficient indicates the share of the energy products which is actually usable for end consumption. Descriptions of density and thermal efficiency coefficient could alternatively be put in an annex.

Both physical unit (litre, kilogram, metric tons, and megawatt hour) and monetary unit (market prices)

2.4. Classification scheme

Include references to relevant international and national standard classifications. If national, give a brief description of the standards. If available, include web addresses to the electronic version of the standards).

We follow the IRES classification (SIEC)

2.5. Data sources

Give an overview of the different data sources used in the collection and compilation of the statistics/topic (e.g. household survey, enterprise/establishment survey, administrative data/registers, foreign trade statistics, production statistics and other primary/secondary data sources).

Examples of administrative sources/registers are: business register for enterprises and establishments, population register, land register, housing and building registers, tax registers, international trade registers, etc.

Data sources are: Household Energy Survey, Economic Surveys and administrative data from Two main sources (General Petroleum Corporation and Palestinian Energy and Natural Resources Authority)

2.6. Population

Describe the entire group of units which is the focus of the statistics (the population).

The whole Palestinian Territory.

Specify the following statistical units:
- Reporting unit
- Observational unit
- Analytical unit

Examples of different kind of statistical units include: enterprise, enterprise group, kind-of-activity unit (KAU), local unit, establishment, homogeneous unit of production.

In most cases the reporting unit, observational unit and analytical unit are identical, but there are examples where this is not the case. In electricity statistics, you may find that energy companies (the reporting unit) provide data about different consumers like the individual household or manufacturing company (the observational unit). The analytical unit may be a group of energy consumers, defined by the ISIC.

Reporting Unit: Households, Establishment
Analytical Unit: Households, Establishment

2.7. Sampling frame and sample characteristics

Describe the type of *sampling frame* used in the collection and compilation of the statistics (e.g. list, area or multiple frames). A sampling frame is the source material or device from which a sample is drawn. Note that the sampling frame might differ from the population.

Irrelevant

For each survey(s) used for the compilation of the statistics, specify the *sampling design* (e.g. random, stratified, etc.). Describe the routines employed for updating the sample. Include information about the sample size, and discuss to what extent the sample covers the population (e.g. energy consumption in the sample compared to total energy use by the population).

Note that chapter *2.7: Sample frame and sample characteristics* may overlap with chapter *3.4: Grossing up procedures.*

Irrelevant

2.8. Collection method

For each survey used for the compilation of the statistics/topic, describe how the data are collected (e.g. face-to-face, telephone, self-administered, paper and internet-based questionnaires, or administrative data and registers).

Administrative data and registers

2.9. Survey participation/response rate

For each survey used for the compilation of the statistics/topic, specify the average response rate, or refer to response rates for specific surveys conducted.

Our main survey resources have the following response rate:
Household Energy Survey January 2011: 99.3%
Economic Series Surveys 2010: 74%

3. The statistical production process

3.1. Data capture and storage

Describe how the data is captured and stored (e.g. if the respondent replies using Internet-based questionnaire, the received data are electronically transferred to the production database. Paper questionnaire responses are keyed manually to the production database).

Data is collected from the administration records in forms sent previously to the sources by PCBS, while the data from survey sources in PCBS are collected electronically.

3.2. Data editing

Describe the regular routines employed for detecting and correcting errors. This may include:
- Manual routines for detecting and correcting errors
- Automatic error-detection (and correction)
- Micro- and macro editing procedures
- Data validation procedures
- Outlier identification
- Processes and sources used for quality controls

Automatic error- detection, Data validation procedures and outlier identification.

3.3. Imputation

Describe the principles for imputation and the assumptions that these principles are based on.
Note that this chapter may overlap with chapter *3.2: Data editing* and chapter *5.2: Accuracy*

Irrelevant

3.4. Grossing up procedures

Describe how the population is divided into strata and what statistical models the estimations in the strata are based on. Describe how sub-indices are combined into aggregate indices and how uncertainty is estimated.

Irrelevant

3.5. Analytical methods

Give a description of any analytical methods used to adjust the data (e.g.: seasonal adjustment and temperature adjustment). A more detailed description of the analytical method can also be included as an annex.

Irrelevant

4. Dissemination

4.1. Publications and additional documentation

Describe the form of dissemination of the statistics/topics in question (e.g. printed publications, website, etc.). Please provide relevant website link(s) if available.

Website
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=1&lang=en
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4281&lang=en
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4280&lang=en

Give a complete reference to publicly available statistics databases where data from the statistics can be extracted. Include web addresses if available online.

http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4280&lang=en
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4281&lang=en

Indicate whether you charge users for access to the statistics at any level of aggregation.

No charge.

4.2. Revisions

Describe the current revision policies. E.g.: Is historical data revised when new methodology, new definitions, new classifications etc. are taken into use? Is the data continuously revised, or is the data revised at certain points in times (e.g. every third year, annually, etc.)?

When new methodologies are taken into consideration, we apply them on the current and future statistics.

If applicable, describe any major conceptual or methodological revisions that have been carried out for this statistic/topic in the past.

Not applicable

4.3. Microdata

Describe how microdata are stored.

In special server at PCBS

Specify if microdata are available for scientific and/or public use. If so, describe under what conditions these are made available.

Available after extracting the confidentiality elements

4.4. Confidentiality

Describe the legal authority that regulates confidentiality, and what restrictions are applied to the publication of the statistics.

1. pledges the utilization of "data" or any copies thereof shall be limited to the purposes agreed upon including not granting any third parties any access to these data. Restrictions applies to any data duplication or transformed setting for purposes other than meeting the requirements of the statistical programs used in data analysis.
2. Utilization of "data" or any copies thereof is limited to personal computers normally.
3. pledges not to alter the value of any observation in the original "data"; nevertheless, this does not apply on subjecting data to any processes or procedures aiming to derive new variables. The first party does not bear any professional, administrative or financial responsibility for any losses incurred as a result of changes in the variables values.

Describe the criteria used to suppress sensitive data in statistical tables (cell suppression).

Irrelevant

Describe how confidential data are handled.

Confidential data are extracted from files given to users.

Describe any confidentiality standards that go beyond what is legally required.

Irrelevant

5. Quality

5.1. Relevance

State to which degree the statistical information meet the real needs of clients/users.

It's satisfactory; sometimes it is needed to be more detailed.

5.2. Accuracy

State the closeness of computations or estimates to the exact or true values that the statistics were intended to measure.

Sometimes it is close and sometimes it is not; the balance suffers from high statistical errors for some fuel types.

Measurement and processing errors
Discuss the measurement and processing errors that are relevant for the statistics. Try as far as possible to give an estimation of the size and scope of the errors.

For the statistical differences, it should be less than 10%; unfortunately it's higher for some entries.

Non-response errors

State the size of the unit non-response and the item non-response, distributed by important variables in the population (e.g. region, industry). Consider if the non-response errors are systematic, and if so, describe the methods used to correct it. Indicate whether the effects of correcting non-response errors on the results have been analysed, and, if so, describe them.

Irrelevant

Sampling errors
Discuss the size of the sampling errors. Compare the population and sample with regards to important properties (e.g. coefficient of variance).

Irrelevant

Other sources of error
Discuss other sources of errors that might be relevant for the statistics. E.g.: Model assumption errors, coverage errors

Coverage errors: We do not have information about some sectors such as the agriculture sector and the government sector including police and security sectors.

5.3. Timeliness and punctuality

Specify the time between the end of the reference period and publication.
If the statistics are published both as preliminary and final figures, specify the time between publication of preliminary and final figures. You should also point out whether the publication date is set according to certain rules (e.g. advance release calendar, a specific day or prior to other publications).

One year reference and the publication date is set according to specific annual plan.

Point out if there have been any major discrepancies between the planned publication date and the actual publication date in recent years. If so, state the length of this discrepancy and its cause.

There were discrepancies some times (1-4 months), because of the resources delay.

5.4. Accessibility

Describe how easily accessible the statistics are. In particular, is there an advance release calendar to inform the users about when and where the data will be available and how to access them?

Are metadata and other user support services easily available? Are there particular groups that don't have access to the published statistics (e.g.: visually disadvantaged)?

Irrelevant

5.5. Comparability

Discuss the comparability of the statistics over time, geographical areas and other domains.

Comparability over time
Discuss comparability over time and include information about whether there have been any breaks in the time series of the statistics and why. Also describe any major changes in the statistical methodology that may have had an impact on comparability over time.

No breaks since we started producing the balance since 2001-2010; slight changes to the methodology have been performed, and it does not have that much impact on comparability.

Comparability over region
Discuss comparability over geographical areas, and include information about whether the statistics are comparable to relevant statistics published by other countries and/or international organisations.

The balance is comparable since we follow the UNSD methodology.

Comparability over other domains
Discuss comparability over domains, and include information about whether the statistics are comparable between different industries, different types of households etc.

It is comparable between industries, but not to household types.

5.6. Coherence and consistency

Discuss the coherence/consistency between preliminary and final figures.

It is consistent.

Discuss the coherence/consistency between monthly, quarterly or yearly statistics within the same subject area. Can the results of different frequencies for the same reference period be combined in a reliable manner?

It is consistent.

Discuss the coherence/consistency with other related statistics (also those produced by other institutions/organisations on the same subject).

Irrelevant

6. Future plans

Are there any current or emerging issues that will need to be addressed in the future? These could include gaps in collection, timeliness issues, data quality concerns, funding risks, confidentiality concerns, simplifications to reduce respondents' burden etc.?

We are working to minimize the statistical differences in the balance by gathering data on agriculture and government sectors and water pumping (at the current state we estimate the consumption of these sectors).

Annexes

Illustrations and flowcharts
Illustrations and flowcharts are useful to summarize information and to get a better overview of the statistical production process. Illustrations and flowcharts can either be places in annexes or be included under relevant paragraphs in the template.

E.g.:
- A conceptual flowchart which illustrates the flow of data in the production of the statistics.
- A flowchart which illustrates the main tasks in the production process and the dependency between them.

Time schedule
Include a time schedule for the different phases of the statistical production process. The statistical production process *may* be divided into the following phases. Phase 1-3 may only be relevant for when a new statistics/survey is set up.

1. **Clarify needs** (e.g. map users needs, identify data sources)
2. **Plan and design** (e.g. plan and design population, sample size, how to analyze and edit data)
3. **Build** (e.g. build and maintain production system, test production system)
4. **Collect** (e.g. Establish a frame, draw the sample, collect data)
5. **Edit** (e.g. identify and code micro data, edit data, imputation)
6. **Analyse** (e.g. quality evaluation, interpret, analyse)
7. **Disseminate** (e.g. publish data, user contact)

Questionnaires
Include the complete questionnaire(s)/survey form(s) used

Example of publication tables
Include an example of a typical table published for the statistics. Include web addresses if available online.

Detailed description on analytical methods
If relevant, a detailed description of analytical methods used in the statistical production (like seasonal adjustment, temperature adjustment etc.) may be described in an annex. A short description can also be included in chapter 3.5: Analytical methods or under other suitable chapters.

Annex 1: Calorific Value and Equivalent Weight of Different Fuels

Fuel	Equivalent Weight (Ton/m3)	Calorific Value (Gigajoules/Ton)
Charcoal	1.00	29.50
Fuel wood	1.00	15.60
Olive cake	1.00	16.75
LPG	0.54	47.30
Lubricating oil	0.90	40.20
Diesel	0.87	43.00
Kerosene	0.81	43.80
Bitumen	1.04	40.20
Gasoline	0.74	44.30

Time schedule (Energy Balance 2011)

Output	Periodicity	Activity Steps	From	To
Statistical Tables	Yearly	Data collection from administrative records and corresponding sources in PCBS	03/06/2012	04/10/2012
		Data entry and data processing	01/08/2012	30/10/2012
		Tabulation	21/10/2012	25/11/2012
		Preparation and adoption of statistical tables	18/11/2012	13/12/2012
		Dissemination	20/12/2012	31/12/2012

Example of publication tables:
The tables are attached and also could be found through the following link:
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4280&lang=en
http://www.pcbs.gov.ps/DesktopDefault.aspx?tabID=4281&lang=en