Annex II: Technical notes

Chapter I: World summary

Table 1: World statistics – selected series

These world aggregates are obtained from other tables in this Yearbook, where available, and are compiled from statistical publications and databases of the United Nations and the specialized agencies and other institutions. The technical notes of the relevant table in this Yearbook should be consulted for detailed information on definition, source, compilation and coverage.

Chapter II: Population and migration

Table 2: Population, surface area and density

The total, male and female population, sex ratio, population age distribution and population density are taken from the estimates and projections prepared by the United Nations Population Division, published in World Population Prospects: The 2017 Revision. Surface area are obtained from the Demographic Yearbook, through this source only official national data are reported.

Total, male and female population refers to the de facto population in a country, area or region as of 1 July of the year indicated, unless otherwise stated in a footnote. Figures are presented in millions. The total population of a country may comprise either all usual residents of the country (de jure population) or all persons present in the country (de facto population) at the time of the census; for purposes of international comparisons, the de facto definition is used, unless otherwise stated in a footnote.

Population aged 0-14 years / 60 years and over refers to the percentage of the population aged 0-14 years and aged 60 years and older, respectively as of 1 July of the year indicated, unless otherwise stated in a footnote.

Population density refers to the population, as of 1 July of the year indicated, per square kilometre of surface area, unless otherwise stated in a footnote.

Sex ratio is calculated as the ratio of the population of men to that of 100 women as of 1 July of the year indicated, unless otherwise stated in a footnote.

Surface area refers to land area plus inland water, unless otherwise stated in a footnote.

Table 3: Population growth and indicators of fertility and mortality


Population rate of increase (or growth rate) is the average annual percentage change in total population size.

Fertility rate is the total fertility rate, a widely used summary indicator of fertility. It refers to the number of children that would be born per woman, assuming no female mortality at child bearing ages and the age-specific fertility rates of a specified country and reference period.

Infant mortality rate (per 1 000 live births) is the ratio of infant deaths (the deaths of children under one year of age) in a given year to the total number of live births in the same year.

Maternal mortality ratio is the ratio of the number of maternal deaths during a given time period per 100 000 live births during the same time-period. A maternal death refers to a female death from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy.

Life expectancy at birth is the average number of years of life at birth (age 0) for males and females according to the expected mortality rates by age estimated for the reference year and population.
Table 4: International migrants and refugees


International migrant stock represents the number of persons born in a country other than that in which they live. When information on country of birth was not recorded, data on the number of persons having foreign citizenship was used instead. In the absence of any empirical data, estimates were imputed. Data refer to mid-2015. Figures for international migrant stock as a percentage of the population are the outcome of dividing the estimated international migrant stock by the estimated total population and multiplying the result by 100.

Refugees include individuals recognised under the 1951 Convention relating to the Status of Refugees; its 1967 Protocol; the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa; those recognised in accordance with the UNHCR Statute; individuals granted complementary forms of protection; or those enjoying temporary protection. Since 2007, the refugee population also includes people in a refugee-like situation.

Asylum-seekers are individuals who have sought international protection and whose claims for refugee status have not yet been determined, irrespective of when they may have been lodged.

“Other” represents the following 5 categories:

- Internally displaced persons (IDPs) are people or groups of individuals who have been forced to leave their homes or places of habitual residence, in particular as a result of, or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights, or natural or man-made disasters, and who have not crossed an international border. For the purposes of UNHCR's statistics, this population only includes conflict-generated IDPs to whom the Office extends protection and/or assistance. Since 2007, the IDP population also includes people in an IDP-like situation. For global IDP estimates, see www.internal-displacement.org.
- Returned refugees are former refugees who have returned to their country of origin spontaneously or in an organised fashion but are yet to be fully integrated. Such return would normally only take place in conditions of safety and dignity.
- Returned IDPs refer to those IDPs who were beneficiaries of UNHCR's protection and assistance activities and who returned to their areas of origin or habitual residence during the year.
- Stateless persons are defined under international law as persons who are not considered as nationals by any State under the operation of its law. In other words, they do not possess the nationality of any State. UNHCR statistics refer to persons who fall under the agency’s statelessness mandate because they are stateless according to this international definition, but data from some countries may also include persons with undetermined nationality.
- Others of concern refers to individuals who do not necessarily fall directly into any of the groups above, but to whom UNHCR extends its protection and/or assistance services, based on humanitarian or other special grounds.

Chapter III: Gender

Table 5: Proportion of seats held by women in national parliament

The table shows the percentage of seats held by women members in single or lower chambers of national parliaments as at January/February each year (see table footnotes for specific details). National parliaments can be bicameral or unicameral. This table covers the single chamber in unicameral parliaments and the lower chamber in bicameral parliaments. It does not cover the upper chamber of bi-cameral parliaments. Seats are usually won by members in general parliamentary elections. Seats may also be filled by nomination, appointment, indirect election, rotation of members and by-election. The proportion of seats held by women in national parliament is derived by dividing the total number of seats occupied by women by the total number of seats in parliament. There is no weighting or normalising of statistics. The source for this table is the Inter-Parliamentary Union (IPU), see www.ipu.org for further information.
Table 6: Ratio of girls to boys in primary, secondary and tertiary education

The ratio of girls to boys (gender parity index) in primary, secondary and tertiary education is the ratio of the number of female students enrolled at primary, secondary and tertiary levels of education to the number of male students in each level. To standardise the effects of the population structure of the appropriate age groups, the Gender Parity Index (GPI) of the Gross Enrolment Ratio (GER) for each level of education is used. The source for this table is the UNESCO Institute for Statistics (UIS), see www.uis.unesco.org for further information.

Chapter IV: Education

Data in Tables 5 and 6 are presented using the 2011 revision of UNESCO’s International Standard Classification of Education (ISCED). Data are presented in the tables based on the three main levels of education defined as follows;

“Primary education” (ISCED level 1) programmes are typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy) and establish a solid foundation for learning and understanding core areas of knowledge, personal and social development, in preparation for lower secondary education. It focuses on learning at a basic level of complexity with little, if any, specialisation.

“Secondary education” (ISCED level 2 and 3) is divided into two different stages, i.e. lower secondary and upper secondary. Lower secondary education programmes are typically designed to build on the learning outcomes from primary. Usually, they aim to lay the foundation for lifelong learning and human development upon which education systems may then expand further educational opportunities. Upper secondary education programmes are typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both. Programmes at this level offer students more varied, specialised and in-depth instruction than programmes at lower secondary. They are more differentiated, with an increased range of options and streams available. Teachers are often highly qualified in the subjects or fields of specialisation they teach, particularly in the higher grades.

Tertiary education (ISCED levels 5-8) builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It comprises ISCED levels 5, 6, 7 and 8, which are labelled as short-cycle tertiary education, Bachelor’s or equivalent level, Master’s or equivalent level, and doctoral or equivalent level, respectively. The content of programmes at the tertiary level is more complex and advanced than in lower ISCED levels.


Table 7: Enrollment in the primary, secondary and tertiary levels

The table shows the number of students enrolled as well as the gross enrolment ratio which is the number of students enrolled, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school year. Enrolment is measured at the beginning of the school or academic year. The gross enrolment ratio at each level will include all pupils whatever their ages, whereas the population is limited to the range of official school ages. Therefore, for countries with almost universal education among the school-age population, the gross enrolment ratio can exceed 100 if the actual age distribution of pupils extends beyond the official school ages.

Table 8: Teaching staff at the primary, secondary and tertiary levels

The table shows the total number of teachers at a given level of education, as well as the proportion of female teachers expressed as a percentage of the total (male and female) at the same level in a given school year. The data sources include school census or surveys and teachers’ records. Teachers (or teaching staff) are defined as persons employed full-time or part-time in an official capacity to guide and direct the learning experience of pupils and students, irrespective of their qualifications or the delivery mechanism, i.e. face-to-face and/or at a distance. This definition excludes educational personnel who have no active teaching duties (e.g. headmasters, headmistresses or principals who do not teach) or who work occasionally or in a voluntary capacity in educational institutions.

Table 9: Public expenditure on education

Public expenditure on education consists of current and capital expenditures on education by local, regional and national governments, including municipalities. Household contributions are excluded. Current expenditure on education includes expenditure for goods and services consumed within the current year and which would need to be
renewed if needed the following year. It includes expenditure on: staff salaries and benefits; contracted or purchased services; other resources including books and teaching materials; welfare services; and other current expenditure such as subsidies to students and households, furniture and equipment, minor repairs, fuel, telecommunications, travel, insurance and rents. Capital expenditure on education includes expenditure for assets that last longer than one year. It includes expenditure for construction, renovation and major repairs of buildings and the purchase of heavy equipment or vehicles.

Chapter V: Health

Table 10: Health personnel

The table shows four main categories of health personnel (out of 9 categories available in the source); Physicians which includes generalist medical practitioners and specialist medical practitioners; Nursing and midwifery personnel which includes nursing professionals, midwifery professionals, nursing associate professionals and midwifery associate professionals. Traditional midwives are not included here; Dentistry personnel includes dentists, dental assistants, dental technicians and related occupations; and Pharmaceutical personnel which includes pharmacists, pharmaceutical assistants, pharmaceutical technicians and related occupations.

The data are obtained from the World Health Organisation’s (WHO) Global Health Workforce Statistics database which are compiled from several sources such as national population censuses, labour force and employment surveys, national statistical products and routine administrative information systems. As a result, considerable variability remains across countries in the coverage, quality and reference year of the original data. In general, the denominator data for health workforce density (i.e. national population estimates) were obtained from the United Nations Population Division's World Population Prospects publication. In some cases, the official report provided only workforce density indicators, from which estimates of the stock were then calculated.

The classification of health workers used is based on criteria for vocational education and training, regulation of health professions, and activities and tasks of jobs, i.e. a framework for categorizing key workforce variables according to shared characteristics. The WHO framework largely draws on the latest revisions to the internationally standardized classification systems of the International Labour Organization (International Standard Classification of Occupations), United Nations Educational, Scientific and Cultural Organization (International Standard Classification of Education), and the United Nations Statistics Division (International Standard Industrial Classification of All Economic Activities). Depending on the nature of each country's situation and the means of measurement, data are available for up to 9 categories of health workers in the aggregated set, and up to 18 categories in the disaggregated set. The latter essentially reflects attempts to better distinguish some subgroups of the workforce according to assumed differences in skill level and skill specialization.

Table 11: Expenditure on health

Total expenditure on health is the sum of all outlays for health maintenance, restoration or enhancement paid for in cash or supplied in kind. It is the sum of General Government Expenditure on Health and Private Expenditure on Health. General government expenditure on health is the sum of health outlays paid for in cash or supplied in kind by government entities, such as the Ministry of Health, other ministries, parastatal organizations or social security agencies (without double counting government transfers to social security and extra budgetary funds). It includes all expenditure made by these entities, regardless of the source, so includes any donor funding passing through them. It includes transfer payments to households to offset medical care costs and extra budgetary funds to finance health services and goods. It includes current and capital expenditure. More information on the definition, methodology, sources and limitations of the data can be found on the Global Health Expenditure Database (see http://apps.who.int/nha/database/DocumentationCentre/Index/fr).

Chapter VI: Crime

Table 12: Intentional homicides and other crimes

“Intentional homicides” and “other crimes” are taken from the United Nations Office on Drugs and Crime, published in their statistics database.

“Intentional Homicide” means unlawful death purposefully inflicted on a person by another person. Data on intentional homicide should also include serious assault leading to death and death as a result of a terrorist attack. It should exclude
attempted homicide, manslaughter, death due to legal intervention, justifiable homicide in self-defence and death due to armed conflict.

"Assault" means physical attack against the body of another person resulting in serious bodily injury, excluding indecent/sexual assault, threats and slapping/punching. 'Assault' leading to death should also be excluded.

“Kidnapping” means unlawfully detaining a person or persons against their will (including through the use of force, threat, fraud or enticement) for the purpose of demanding for their liberation an illicit gain or any other economic gain or other material benefit, or in order to oblige someone to do or not to do something. “Kidnapping” excludes disputes over child custody.

“Theft” means depriving a person or organisation of property without force with the intent to keep it. “Theft” excludes Burglary, housebreaking, Robbery, and Theft of a Motor Vehicle, which are recorded separately.

Total "Sexual violence” means rape and sexual assault, including Sexual Offences against Children.

Chapter VII: National accounts

The National Accounts Main Aggregates Database (available at http://unstats.un.org/unsd/snaama) presents national accounts data for more than 200 countries and areas of the world. It is the basis for the publication of National Account Statistics: Analysis of Main Aggregates (AMA), a publication prepared by the Statistics Division of the Department for Economic and Social Affairs of the United Nations Secretariat with the generous co-operation of national statistical offices. The database is updated in December of each year with newly available national accounts data for all countries and areas.

The National Accounts Main Aggregates Database is based on the data obtained from the United Nations National Accounts Questionnaire (NAQ) introduced in October 1999, which in turn is based on the System of National Accounts 1993 (1993 SNA). The data are supplemented with estimates prepared by the Statistics Division. The updated SNA, called the System of National Accounts 2008 (2008 SNA) was finalised in September 2009. As of 2015, 63 countries and territories (European Union Member States, Albania, Argentina, Australia, Brazil, Brunei Darussalam, Canada, China, Hong Kong SAR, China, Macao SAR, Dominican Republic, Ecuador, India, Indonesia, Israel, Kenya, Mexico, Mongolia, New Zealand, Nigeria, Pakistan, Peru, Philippines, Republic of Korea, Serbia, Singapore, South Africa, Swaziland, Timor-Leste, Uganda, Ukraine, the United States of America and Zambia) have started submitting data according to the 2008 SNA.

Every effort has been made to present the estimates of the various countries or areas in a form designed to facilitate international comparability. To this end, important differences in concept, scope, coverage and classification have been described in the footnotes for individual countries. Such differences should be taken into account to avoid misleading comparisons. Data contained in the tables relate to the calendar year for which they are shown, except in several cases. These special cases are posted on the National Accounts Main Aggregates Database website (http://unstats.un.org/unsd/snaama/notes.asp). The figures shown are the most recent estimates and revisions available at the time of compilation. In general, figures for the most recent year are to be regarded as provisional. The sums of the components in the tables may not necessarily add up to totals shown because of rounding.

Table 13: Gross domestic product and gross domestic product per capita

This table shows gross domestic product (GDP) and GDP per capita in US dollars at current prices, GDP at constant 2005 prices and the corresponding real rates of growth. The tables are intended to facilitate international comparisons of levels of income generated in production. Official data and estimates of total and per capita GDP at current prices have been converted to US dollars, while total GDP at constant prices are converted to 2005 prices before conversion to US dollars using the 2005 exchange rates. The conversion methodology to US dollars is described in the document on the methodology for the National Accounts Main Aggregates Database (http://unstats.un.org/unsd/snaama/methodology.pdf). For inter-country comparisons over time, it would be more appropriate to use the growth rate in the table based on constant price data, which are more indicative of inter-country and intra-grouping comparisons of trends in total GDP. The growth rate shown in the table is computed as geometric mean of annual growth rates expressed as percentages for the years.

Table 14: Gross value added by kind of economic activity

This table presents the shares of the components of gross value added at current prices by kind of economic activity.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Comprises of (in terms of ISIC 3):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Agriculture, hunting, forestry and fishing (ISIC A-B)</td>
</tr>
</tbody>
</table>
Industry | Mining and quarrying, Manufacturing, Electricity, gas and water supply (ISIC C-E)  
| Construction (ISIC F)  

Services | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, Hotels and restaurants (ISIC G-H)  
| Transport, storage and communications (ISIC I)  
| Other activities which includes financial intermediation, real estate, renting and business activities, public administration and defense; compulsory social security, education, health and social work, other community, social and personal service activities, private households with employed persons (ISIC J-P).  

Chapter VIII: Finance

Detailed information and current figures relating to table 12 are contained in International Financial Statistics, published by the International Monetary Fund (see also http://elibrary-data.imf.org) and in the United Nations Monthly Bulletin of Statistics.

Table 15: Balance of payments summary

A balance of payments can be broadly described as the record of an economy’s international economic transactions. It shows (a) transactions in goods, services and income between an economy and the rest of the world, (b) changes of ownership and other changes in that economy’s monetary gold, special drawing rights (SDRs) and claims on and liabilities to the rest of the world, and (c) unrequited transfers and counterpart entries needed to balance in the accounting sense any entries for the foregoing transactions and changes which are not mutually offsetting. The balance of payments data are presented on the basis of the methodology and presentation of the sixth edition of the Balance of Payments Manual (BPM6), published by the International Monetary Fund in November 2013. The BPM6 incorporates several major changes to take account of developments in international trade and finance over the years, and to better harmonize the Fund’s balance of payments methodology with the methodology of the 2008 System of National Accounts (SNA). The detailed definitions concerning the content of the basic categories of the balance of payments are given in the Balance of Payments Manual (sixth edition)

Brief explanatory notes are given below to clarify the scope of the major items.

Current account is a record of all transactions in the balance of payments covering the exports and imports of goods and services, payments of income, and current transfers between residents of a country and non-residents.

Capital account, n.i.e. refers mainly to capital transfers linked to the acquisition of a fixed asset other than transactions relating to debt forgiveness plus the disposal of nonproduced, nonfinancial assets, and to capital transfers linked to the disposal of fixed assets by the donor or to the financing of capital formation by the recipient, plus the acquisition of nonproduced, nonfinancial assets.

Financial account, n.i.e. is the net sum of the balance of direct investment, portfolio investment, and other investment transactions.

Reserves and related items is the sum of transactions in reserve assets, LCFARs, exceptional financing, and use of Fund credit and loans.

Table 16: Exchange rates

Foreign exchange rates are shown in units of national currency per US dollar. The exchange rates are classified into three broad categories, reflecting both the role of the authorities in the determination of the exchange and/or the multiplicity of exchange rates in a country. The market rate is used to describe exchange rates determined largely by market forces; the official rate is an exchange rate deter-mined by the authorities, sometimes in a flexible manner. For countries maintaining multiple exchange arrangements, the rates are labelled principal rate, secondary rate, and tertiary rate. Unless otherwise stated, the table refers to end of period and period averages of market exchange rates or official exchange rates.

Chapter IX: Labour market

A comparable and comprehensive collection of data on labour force and related topics are available from the International Labour Organisation’s (ILO) Key Indicators of the Labour Market (KILM) publication, which is updated
every 2 years. More timely information is contained in the ILO’s ILOSTAT data repository (see www.iло.org/ilostat) which publishes data as it is received from the countries either on an annual, quarterly or monthly basis but does not include all the consistency checks nor include all the sources used by KILM. For various reasons, national definitions of employment and unemployment often differ from the recommended international standard definitions and thereby limit international comparability. Inter-country comparisons are also complicated by a variety of types of data collection systems used to obtain information on employed and unemployed persons. The ILOSTAT website provides a comprehensive description of the methodology underlying the labour series.

Table 17: Labour force participation rate and unemployment rate

Labour force participation rate is calculated by expressing the number of persons in the labour force as a percentage of the working-age population. The labour force is the sum of the number of persons employed and the number of unemployed (see ILO’s current International Recommendations on Labour Statistics). The working-age population is the population above a certain age, prescribed for the measurement of economic characteristics. The data refer to the age group of 15 years and over and are based on ILO’s modelled estimates, unless otherwise stated in a footnote. Unemployment” is defined to include persons above a certain age who, during a specified period of time were:

(a) “Without work”, i.e. were not in paid employment or self-employment;
(b) “Currently available for work”, i.e. were available for paid employment or self-employment during the reference period; and
(c) “Seeking work”, i.e. had taken specific steps in a specified period to find paid employment or self-employment

Persons not considered to be unemployed include:

(a) Persons intending to establish their own business or farm, but who had not yet arranged to do so and who were not seeking work for pay or profit;
(b) Former unpaid family workers not at work and not seeking work for pay or profit.

The series generally represent the total number of persons wholly unemployed or temporarily laid-off. Percentage figures, where given, are calculated by comparing the number of unemployed to the total members of that group of the labour force on which the unemployment data are based.

Table 18: Employment by economic activity

The employment table presents the percentage distribution of employed persons by economic activity, according to International Standard Industry Classification (ISIC) version 4.

Chapter X: Price and production indices

Table 19: Agricultural production

“Agriculture” relates to the production of all crops and livestock products. The “Food Index” includes those commodities which are considered edible and contain nutrients. The index numbers of agricultural output and food production are calculated by the Laspeyres formula with the base year period 2004-2006. The latter is provided in order to diminish the impact of annual fluctuations in agricultural output during base years on the indices for the period. Production quantities of each commodity are weighted by 2004-2006 average national producer prices and summed for each year. The index numbers are based on production data for a calendar year. These may differ in some instances from those actually produced and published by the individual countries themselves due to variations in concepts, coverage, weights and methods of calculation. Efforts have been made to estimate these methodological differences to achieve a better international comparability of data. Detailed data on agricultural production are published by FAO in its Statistical Yearbook.

Chapter XI: International merchandise trade

The International Trade Statistics Yearbook (ITSY) provides an overview of the latest trends of trade in goods and services of most countries and areas in the world, a publication prepared by the Statistics Division of the Department for Economic and Social Affairs of the United Nations Secretariat. The yearbook, see http://comtrade.un.org/pb/, is released in two volumes; Volume I is compiled earlier in the year to present an advanced overview of international merchandise trade from the previous year, Volume II, generally released six months later, contains detailed tables showing international trade for individual commodities and 11 world trade tables covering trade values and indices.
Volume II also contains updated versions of world trade tables. The table in this yearbook are also updated monthly in the United Nations Monthly Bulletin of Statistics and on the trade statistics website, see http://unstats.un.org/unsd/trade/data/tables.asp#annual.

The statistics in this Yearbook have been compiled by national statistical authorities largely consistent with the United Nations recommended International Merchandise Trade Statistics, Concepts and Definitions 2010 (IMTS 2010). Depending on what parts of the economic territory are included in the statistical territory, the trade data-compilation system adopted by a country (its trade system) may be referred to as general or special.

<table>
<thead>
<tr>
<th>General trade system</th>
<th>The statistical territory coincides with the economic territory. Consequently, it is recommended that the statistical territory of a country applying the general trade system comprises all applicable territorial elements. In this case, imports include goods entering the free circulation area, premises for inward processing, industrial free zones, premises for customs warehousing or commercial free zones and exports include goods leaving those territorial elements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special trade system</td>
<td><em>(strict definition)</em> The statistical territory comprises only a particular part of the economic territory, so that certain flows of goods which are in the scope of IMTS 2010 are not included in either import or export statistics of the compiling country. The strict definition of the special trade system is in use when the statistical territory comprises only the free circulation area, that is, the part within which goods “may be disposed of without customs restriction”. Consequently, in such a case, imports include only goods entering the free circulation area of a compiling country and exports include only goods leaving the free circulation area of a compiling country.</td>
</tr>
<tr>
<td></td>
<td><em>(relaxed definition)</em> (a) goods that enter a country for, or leave it after, inward processing, as well as (b) goods that enter or leave an industrial free zone, are also recorded and included in international merchandise trade statistics.</td>
</tr>
</tbody>
</table>

Generally, all countries report their detailed merchandise trade data according to the Harmonized Commodity Description and Coding System (HS) and the data correspond and are then presented by Standard International Trade Classifications (SITC, Rev.3). Data refer to calendar years; however, for those countries which report according to some other reference year, the data are presented in the year which covers the majority of the reference year used by the country.

FOB-type values include the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country. CIF-type values include the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country. Therefore, data for the statistical value of imported goods are presented as a CIF-type value and the statistical value of exported goods as an FOB-type value.

Conversion of values from national currencies into United States dollars is done by means of currency conversion factors based on official exchange rates. Values in currencies subject to fluctuation are converted into United States dollars using weighted average exchange rates specially calculated for this purpose. The weighted average exchange rate for a given currency for a given year is the component monthly factors, furnished by the International Monetary Fund in its International Financial Statistics publication, weighted by the value of the relevant trade in each month; a monthly factor is the exchange rate (or the simple average rate) in effect during that month. These factors are applied to total imports and exports and to the trade in individual commodities with individual countries.

**Table 20: Total imports, exports and balance of trade**

Figures on the total imports and exports of countries (or areas) presented in this table are mainly taken from International Financial Statistics published monthly by the International Monetary Fund (IMF) but also from other sources such as national publications and websites and the United Nations Monthly Bulletin of Statistics Questionnaire, see the *International Trade Statistics Yearbook* for further details. Estimates for missing data are made in order to arrive to regional totals but are otherwise not shown. The estimation process is automated using quarterly year-on-year growth rates for the extrapolation of missing quarterly data (unless quarterly data can be estimated using available monthly data within the quarter). The conversion factors applied to data in this table are published quarterly in the...

**Table 21: Major trading partners**

Figures on major trading partners show the three largest trade partners (countries of last known destination and origin or consignment) in international merchandise trade transactions. In some cases a special partner is shown (i.e. Areas nes, bunkers, etc.) instead of a country and refers to one of the following special categories. Areas not elsewhere specified (i.e. Areas nes) is used (a) for low value trade, (b) if the partner designation was unknown to the country or if an error was made in the partner assignment and (c) for reasons of confidentiality. If a specific geographical location can be identified within Areas nes, then they are recorded accordingly (i.e. Asia nes). Bunkers are ship stores and aircraft supplies, which consists mostly of fuels and food. Free zones belong to the geographical and economic territory of a country but not to its customs territory. For the purpose of trade statistics the transactions between the customs territory and the free zones are recorded, if the reporting country uses the Special Trade System. Free zones can be commercial free zones (duty free shops) or industrial free zones. Data are expressed as percentages of total exports and of total imports of the country, area or special partner.

**Chapter XII: Energy**

The Energy Statistics Yearbook (available at http://unstats.un.org/unsd/energy/yearbook) is a comprehensive collection of international energy statistics for over 220 countries and areas. The yearbook is prepared by the Statistics Division of the Department for Economic and Social Affairs of the United Nations Secretariat. The yearbook is produced every year with newly available data on energy production, trade, stock changes, bunkers and consumption for all countries and areas, and a historical series back to 1950 are available. The data are compiled primarily from the annual energy questionnaire distributed by the United Nations Statistics Division and supplemented by official national statistical publications, as well as publications from international and regional organizations. Where official data are not available or are inconsistent, estimates are made by the Statistics Division based on governmental, professional or commercial materials.

The period to which the data refer is the calendar year, with the exception of the data of the following countries which refer to the fiscal year: Afghanistan and Iran (Islamic Rep. of) – beginning 21 March of the year stated; Australia, Bangladesh, Bhutan, Egypt (for the latter two, electricity only), Nepal - ending June of the year stated; Pakistan - starting July of the year stated; India, Myanmar and New Zealand – beginning April of the year stated. Data on a per capita basis use population data from the United Nations Population Division as a denominator.

**Table 22: Production, trade and supply of energy**

Data are presented in petajoules (gigajoules per capita), to which the individual energy commodities are converted in the interests of international uniformity and comparability. To convert from original units to joules, the data in original units (metric tons, metric tons of oil equivalent, kilowatt hours, cubic metres) are multiplied by conversion factors. For a list of the relevant conversion factors and a detailed description of methods, see the Energy Statistics Yearbook.

Included in the production of commercial primary energy for solids are hard coal, lignite, peat and oil shale; liquids are comprised of crude petroleum, natural gas liquids, other hydrocarbons, additives and oxygenates, and liquid biofuels; gas comprises natural gas and primary steam/heat; and electricity is comprised of primary electricity generation from hydro, nuclear, geothermal, wind, tide, wave and solar sources.

Net imports (imports less exports and bunkers) and changes in stocks, refer to all primary and secondary forms of energy (including feedstocks). Within net imports; bunkers refer to bunkers of aviation gasoline, jet fuel and of hard coal, gas-diesel oil and residual fuel oil. International trade of energy commodities is based on the “general trade” system, that is, all goods entering and leaving the national boundary of a country are recorded as imports and exports.

Included in the consumption of energy are primary forms of solid fuels, net imports and changes in stocks of secondary fuels; liquids which is energy use of oil products includes feedstocks and refinery gas, and direct use of crude petroleum; gases include the consumption of natural gas and primary heat, net imports and changes in stocks of manufactured gases; and electricity which is comprised of primary electricity production and net imports of electricity. Consumption for some of the petroleum products is negative due to the exclusion of inter-product transfers from the calculations. Negative consumption of electricity is due to negligible primary electricity production as compared to net exports. More generally, negative consumption can represent a residual or statistical difference between production and exports when a particular product is mainly exported.
Chapter XIII: Environment

Table 23: Land

The data on land are compiled by the Food and Agriculture Organization of the United Nations (FAO). FAO’s definitions of the land categories are as follows:

<table>
<thead>
<tr>
<th>Land area</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area excluding area under inland water bodies.</td>
<td>The definition of inland water bodies generally includes major rivers and lakes.</td>
</tr>
<tr>
<td>Arable land</td>
<td>Land under temporary crops (multiple cropped areas are counted only once); temporary meadows for mowing or pasture; land under market and kitchen gardens; and land temporarily fallow (less than five years). Abandoned land resulting from shifting cultivation is not included in this category. Data for “arable land” are not meant to indicate the amount of land that is potentially cultivable.</td>
</tr>
<tr>
<td>Permanent crops</td>
<td>Land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee and rubber. This category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land under trees grown for wood or timber.</td>
</tr>
<tr>
<td>Forest</td>
<td>In the Global Forest Resources Assessment 2010 the following definition is used for forest: Land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.</td>
</tr>
<tr>
<td>Sites protected for terrestrial biodiversity</td>
<td>Land which contributes significantly to the global persistence of biodiversity measured as a proportion of which is wholly covered by a designated protected area. Data are based on spatial overlap between polygons for Key Biodiversity Areas from the World Database of key Biodiversity Areas and polygons for protected areas from the World Database on Protected Areas. Figures for each region are calculated as the proportion of each Key Biodiversity Area covered by protected areas, averaged (i.e. calculated as the mean) across all Key Biodiversity Areas within the region.</td>
</tr>
</tbody>
</table>

Table 24: Threatened species

Data on the number of threatened species in each group of animals and plants are compiled by the World Conservation Union (IUCN)/Species Survival Commission (SSC) and published in the IUCN Red List of Threatened Species. The list provides a catalogue of those species that are considered globally threatened. The number of threatened species for any particular country will change between years for a number of reasons, including:

- New information being available to refine the assessment (e.g., confirmation that the species occurs or does not occur in a particular country, confirmation that the species is or is not threatened, etc.)
- Taxonomic changes (e.g., what was previously recognised as one species is now split into several separate species, or has now been merged with another species).
- Corrections (e.g., the previous assessment may have missed a particular country out of its country occurrence list or included a specific country by mistake).
- Genuine status changes (e.g., a species may have genuinely deteriorated or improved in status and therefore has moved into or out of the threatened categories).

The categories used in the Red List are as follows: extinct, extinct in the wild, critically endangered; endangered, vulnerable, near threatened and data deficient.

Table 25: CO₂ emissions estimates

The source of the data presented on the emissions of carbon dioxide (CO₂) is the Carbon Dioxide Information Analysis Centre (CDIAC) of the Oak Ridge National Laboratory in the USA, see http://cdiac.ornl.gov/. The CDIAC estimates of CO₂ emissions are derived primarily from United Nations energy statistics on the consumption of liquid and solid fuels and gas consumption and flaring, and from cement production estimates from the Bureau of Mines of the U.S. Department of Interior. The emissions presented in the table are in units of 1,000 metric tons of CO₂; to convert CO₂ into carbon, divide the data by 3.667. Full details of the procedures for calculating emissions are given in Global, Regional, and National Annual CO₂ Emissions Estimates from Fossil Fuel Burning, Hydraulic Cement Production, and Gas Flaring and on the CDIAC web site. Relative to other industrial sources for which CO₂ emissions are estimated,
statistics on gas flaring activities are sparse and sporadic. In countries where gas flaring activities account for a considerable proportion of the total CO₂ emissions, the sporadic nature of gas flaring statistics may produce spurious or misleading trends in national CO₂ emissions over the period covered by the table.

**Table 26: Water supply and sanitation services**

These data are estimated by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) based on available country sources, see [www.wssinfo.org](http://www.wssinfo.org) for further information. The proportion of the population using safely managed drinking water services is defined as the population using an improved drinking water source (the indicator used for Millennium Development Goals monitoring) which is located on premises, and available when needed, and free of faecal and priority chemical contamination. In order to meet the criteria for a safely managed drinking water service, people must use an improved source meeting three criteria:

- it should be accessible on premises,
- water should be available when needed, and
- the water supplied should be free from contamination.

If the improved source does not meet any one of these criteria but a round trip to collect water takes 30 minutes or less, then it will be classified as a basic drinking water service. If water collection from an improved source exceeds 30 minutes it will be categorised as a limited service. The JMP also differentiates populations using unimproved sources such as unprotected wells or springs, and populations drinking surface water collected directly from a river, dam, lake, stream or irrigation canal.

For the proportion of the population using “safely managed sanitation services”, there are three main ways to meet the criteria for having a safely managed sanitation service. People should use improved sanitation facilities which are not shared with other households, and the excreta produced should either be:

- treated and disposed in situ,
- stored temporarily and then emptied and transported to treatment off-site, or
- transported through a sewer with wastewater and then treated off-site.

If the excreta from improved sanitation facilities are not safely managed then people using those facilities will be classed as having a basic sanitation service. People using improved facilities which are shared with other households will be classified as having a limited service.

**Chapter XIV: Science and technology**

**Table 27: Population employed in research and development (R&D)**

The data presented on human resources in research and development (R&D) are compiled by the UNESCO Institute for Statistics. Data for certain countries are provided to UNESCO by OECD, Eurostat and the Latin-American Network on Science and Technology Indicators (RICYT). The definitions and classifications applied by UNESCO in the table are based on those set out in the Frascati Manual (OECD, 2002). The three categories of personnel shown are defined as follows:

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of the projects concerned. Postgraduate students at the PhD level (ISCED level 8) engaged in R&amp;D are considered as researchers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technicians and equivalent staff</td>
<td>Persons whose main tasks require technical knowledge and experience in one or more fields of engineering, physical and life sciences (technicians) or social sciences and humanities (equivalent staff). They participate in R&amp;D by performing scientific and technical tasks involving the application of concepts and operational methods, normally under the supervision of researchers.</td>
</tr>
<tr>
<td>Other supporting staff</td>
<td>Skilled and unskilled craftsmen, secretarial and clerical staff participating in R&amp;D projects or directly associated with (or providing services to researchers involved in) such projects.</td>
</tr>
</tbody>
</table>

Headcount data reflect the total number of persons employed in R&D, independently from their dedication. Full-time equivalent (FTE) may be thought of as one person-year. Thus, a person who normally spends 30% of his/her time on R&D and the rest on other activities (such as teaching, university administration and student counselling) should be
considered as 0.3 FTE. Similarly, if a full-time R&D worker is employed at an R&D unit for only six months, this results in an FTE of 0.5.

**Table 28: Gross domestic expenditure on research and development (R&D)**

The data presented on gross domestic expenditure on research and development are compiled by the UNESCO Institute for Statistics. Data for certain countries are provided to UNESCO by OECD, EUROSTAT and the Network on Science and Technology Indicators (RICYT). Gross domestic expenditure on R&D (GERD) is total intramural expenditure on R&D performed on the national territory during a given period. It includes R&D performed within a country and funded from abroad but excludes payments made abroad for R&D. The sources of funds for GERD are classified according to the following five categories:

<table>
<thead>
<tr>
<th>Funds</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business enterprise funds</td>
<td>Funds allocated to R&amp;D by all firms, organizations and institutions whose primary activity is the market production of goods and services (other than the higher education sector) for sale to the general public at an economically significant price, and those private non-profit institutes mainly serving these firms, organizations and institutions.</td>
</tr>
<tr>
<td>Government funds</td>
<td>Funds allocated to R&amp;D by all departments, offices and other bodies which furnish, but normally do not sell to the community, those common services, other than higher education, which cannot otherwise be conveniently and economically provided, as well as those that administer the state and the economic and social policy of the community. Public enterprises, mainly engaged in market production and sale of goods and services, funds are included in the business enterprise funds sector. Government funds also include private non-profit institutes controlled and mainly financed by government, not administered by the higher education sector.</td>
</tr>
<tr>
<td>Higher education funds</td>
<td>Funds allocated to R&amp;D by institutions of higher education comprising all universities, colleges of technology, other institutions providing tertiary education (i.e. ISCED 5, 6, 7 or 8), whatever their source or finance or legal status. They also include all research institutes, experimental stations and clinics operating under the direct control of or administered by or associated with higher education institutions.</td>
</tr>
<tr>
<td>Private non-profit funds</td>
<td>Funds allocated to R&amp;D by non-market, private non-profit institutions serving households (i.e. the general public), as well as by private individuals and households.</td>
</tr>
<tr>
<td>Funds from abroad</td>
<td>Funds allocated to R&amp;D by all institutions and individuals located outside the political borders of a country; and all international organizations (except business enterprises), including facilities and operations within the country’s borders.</td>
</tr>
</tbody>
</table>

The absolute figures for R&D expenditure should not be compared country by country. Such comparisons would require the conversion of national currencies into a common currency by means of special R&D exchange rates. Official exchange rates do not always reflect the real costs of R&D activities and comparisons that are based on such rates can result in misleading conclusions, although they can be used to indicate a gross order of magnitude.

**Table 29: Patents**

A patent is granted by a national patent office or by a regional office that does the work for a number of countries, such as the European Patent Office and the African Regional Intellectual Property Organisation. Under such regional systems, an applicant requests protection for the invention in one or more countries, and each country decides as to whether to offer patent protection within its borders. The World Intellectual Property Organisation (WIPO) administered Patent Cooperation Treaty (PCT) provides for the filling of a single international patent application which has the same effect as national applications filed in the designated countries. Data include resident intensity, patents granted and patents in force. Patent intensity is presented as the resident patent fillings per million population, where as resident Intellectual Property (IP) filling refers to an application filed by an applicant at its national IP office. IP grant (registration) data are based on the same concept. In force refers to a patent or other form of IP protection that is currently valid. Country of origin is used to categorise IP data by resident (domestic) and non-resident (foreign). The residence of the first-named applicant (or inventor) recorded in the IP document (e.g. patent or trademark application) is used to classify IP data by country of origin. The data are compiled and published by the WIPO.
Chapter XV: International tourism and transport

The data on international tourism have been supplied by the World Tourism Organization (UNWTO) from detailed tourism information published in either the Yearbook of Tourism Statistics or Compendium of Tourism Statistics, see www.unwto.org/statistics for further information. For statistical purposes, the term “international visitor” describes “any person who travels to a country other than that in which he/she has his/her usual residence but outside his/her usual environment for a period not exceeding 12 months and whose main purpose of visit is other than the exercise of an activity remunerated from within the country visited”. There are four series presented in the UNWTO yearbook and compendium, but only one series is selected to be presented in this yearbook, generally based on the following priority order to best describe an “international visitor”;

<table>
<thead>
<tr>
<th>Order</th>
<th>Series code</th>
<th>Series name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TF</td>
<td>Arrivals of non-resident tourists at national borders are visitors who stay at least one night in a collective or private accommodation in the country visited (excludes same-day visitors)</td>
</tr>
<tr>
<td>2</td>
<td>VF</td>
<td>Arrivals of non-resident visitor at national borders are visitors as defined in series “TF” as well as same-day visitors who do not spend the night in a collective or private accommodation in the country visited</td>
</tr>
<tr>
<td>3</td>
<td>TCE</td>
<td>Arrivals of non-resident tourists in all types of accommodation establishments</td>
</tr>
<tr>
<td>4</td>
<td>THS</td>
<td>Arrivals of non-resident tourists in hotels and similar establishments</td>
</tr>
</tbody>
</table>

The figures do not include immigrants, residents in a frontier zone, persons domiciled in one country or area and working in an adjoining country or area, members of the armed forces and diplomats and consular representatives when they travel from their country of origin to the country in which they are stationed and vice-versa. The figures also exclude persons in transit who do not formally enter the country through passport control, such as air transit passengers who remain for a short period in a designated area of the air terminal or ship passengers who are not permitted to disembark. This category includes passengers transferred directly between airports or other terminals. Other passengers in transit through a country are classified as visitors.

Table 30: Tourist/visitor arrivals and tourism expenditure

Data on arrivals of non-resident (or international) visitors may be obtained from different sources. In some cases data are obtained from border statistics derived from administrative records (police, immigration, traffic counts and other types of controls), border surveys and registrations at accommodation establishments. Totals correspond to the total number of arrivals from the regions indicated in the table. When a person visits the same country several times a year, an equal number of arrivals is recorded. Likewise, if a person visits several countries during the course of a single trip, his/her arrival in each country is recorded separately. Consequently, arrivals cannot be assumed to be equal to the number of persons travelling.

Expenditure associated with tourism activity of visitors has been traditionally identified with the travel item of the Balance of Payments (BOP); in the case of inbound tourism, those expenditures in the country of reference associated with non-resident visitors are registered as “credits” in the BOP and refer to “travel receipts”. The new conceptual framework approved by the United Nations Statistical Commission in relation to the measurement of tourism macroeconomic activity (the so-called Tourism Satellite Account) considers that “tourism industries and products” includes transport of passengers. Consequently, a better estimate of tourism-related expenditures by resident and non-resident visitors in an international scenario would be, in terms of the BOP, the value of the travel item plus that of the passenger transport item. Nevertheless, users should be aware that BOP estimates include, in addition to expenditures associated with visitors, those related to other types of individuals. The data published should allow international comparability and therefore correspond to those published by the International Monetary Fund and provided by the Central Banks, any exceptions are listed within the Compendium of Tourism Statistics and the Yearbook of Tourism Statistics, see www.unwto.org/statistics for further information.

Table 31: Civil aviation: scheduled airline traffic

The data on civil aviation are published annually in the Annual Report of the Council of the International Civil Aviation Organisation. The data are based on reported data as well as estimates for the non-reporting airlines. Data for total traffic cover both domestic and international scheduled services operated by airlines registered in each country. Scheduled services include supplementary services occasioned by overflow traffic on regularly scheduled trips and preparatory flights for newly scheduled services. The data are prepared by the International Civil Aviation Organisation (see www.icao.int). The following terms have been used in the table:
- Kilometers flown – aircraft kilometres performed, which is the sum of the products obtained by multiplying the number of revenue flight stages flown by the corresponding stage distance.

- Passengers carried – the number of passengers carried is obtained by counting each passenger on a particular flight (with one flight number) once only and not repeatedly on each individual stage of that flight, with a single exception that a passenger flying on both the international and domestic stages of the same flight should be counted as both a domestic and international passenger.

- Passenger-kilometres performed – a passenger kilometre is performed when a passenger is carried one kilometre. Calculation of passenger-kilometres equals the sum of the products obtained by multiplying the number of revenue passengers carried on each flight stage by the stage distance. The resultant figure is equal to the number of kilometres travelled by all passengers.

- Tonne-kilometres performed – a metric tonne of revenue load carried one kilometre. Tonne-kilometres performed equals the sum of the product obtained by multiplying the number of total tonnes of revenue load (passengers, freight and mail) carried on each flight stage by the stage distance.
Chapter XVI: Development assistance

Table 32: Net disbursements of official development assistance to recipients

The table presents estimates of flows of financial resources to individual recipients either directly (bilaterally) or through multilateral institutions (multilaterally). The multilateral institutions include the World Bank Group, regional banks, financial institutions of the European Union and a number of United Nations institutions, programmes and trust funds. The source of data is the Development Assistance Committee (DAC) of OECD to which member countries reported data on their flow of resources to developing countries and territories, countries and territories in transition, and multilateral institutions. Additional information on definitions, methods and sources can be found in OECD’s Geographical Distribution of Financial Flows to Developing Countries publication, also see http://stats.oecd.org/ for further information.

Table 33: Net disbursements of official development assistance from donors

The table presents the development assistance expenditures of donor countries. This table includes donors’ contributions to multilateral agencies; therefore, the overall totals differ from those in table 25, which include disbursements by multilateral agencies.

***