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Activities not classified by field:  coordination of development
**indicators**

**Room document accompanying**


**An Assessment of the Statistical Indicators
derived from United Nations Summit Meetings
(E/CN.3/2002/26)**

**Friends of the Chair**

**Introduction**

1.      To assist the work of assessing the development indicators arising from United Nations summit meetings, the Friends of the Chair asked seven expert groups to undertake detailed assessments for seven "domains" of development indicators, namely:

- Demography
- Health and Nutrition
- Environment and Energy
- Economics and Poverty
- Employment and Labour
- Education
- Other Social Indicators.

2.      At the conclusion of its work, each expert group was asked to provide a brief report on its processes and the issues it faced.  This document consolidates the seven reports.

3.      This document does not provide detailed technical assessments of the indicators; such assessments are provided on the United Nations Statistical Division (UNSD) Website:

# http://esa.un.org/unsd/indicatorfoc

**Expert Groups: Their Operation and Reports**

4.      Each expert group was convened by an expert in the field:

- *Demography:* David Pearce, United Kingdom
- *Health and Nutrition:* Jennifer Madans, USA
- *Environment and Energy:* Hilary Hillier, United Kingdom and Bob Harrison, Australia
- *Economics and Poverty:* Rob Edwards, Australia
- *Employment and Labour:* Ian Macredie, Canada
- *Education:* Scott Murray, Canada
- *Other Social Indicators:* Linda Sabbadini, Italy

5.      The convenors, advised by UNSD staff, recruited members of their expert groups. In all, 94 experts from 37 countries participated in the process.

6.      The main task of each expert group was to assess the indicators arising from United Nations summits and other meetings and conferences, then to assign those

indicators to the three priority tiers (discussed in paragraphs 22 and 60 of the Friends of the Chair report).

7.       <u>Attachment 1</u> shows the expert groups' terms of reference.

8.       The expert groups were ably supported by UNSD staff who provided the lists of conference indicators and descriptions of the policy goals applicable to each domain. UNSD also undertook an initial technical evaluation of many of the conference indicators.

**Operation**

9.       All seven expert groups began by defining sub-domains that corresponded to a separate area of policy and a relatively self-contained set of indicators. Most groups defined around half-a-dozen subdomains.

10.      The groups then undertook an assessment of indicator priorities. Although the processes differed in matters of detail from group to group, most priority assessments had regard to much the same broad considerations, including:

- Preserving the indicators defined by key summit meetings and conferences, with special emphasis on such suites of indicators as the UN Minimum Data Set, OECD International Development Targets, UNDAF Common Country Assessment Indicators, World Bank Development Indicators and the Millennium Goals Dataset.

- Selecting indicators that are relevant to assessing progress against key international and national policy goals.

- Selecting indicators that are widely available, are comparable internationally and are compiled on regular basis.

- Selecting indicators that are technically defensible.

11.      Some expert groups adopted scoring or polling procedures to help their assignment of priorities.

12.      Throughout most of their work the expert groups operated independently (with some liaison where particular indicators were considered by more than one theme group). Having completed the initial process the group chairs were then brought together to integrate the emerging findings into a coherent whole. This process was used to check that common standards of priority allocation had been used and to ensure that the balance between the numbers of subdomains and the distribution of indicators to tiers was reasonably consistent. This was the opportunity also to ensure that policy objectives such as those relating to gender

and children that cut across the domains were adequately taken into account in the classification.

**Reports**

13.     The expert groups' short reports are in <u>Attachment 2</u>.  Each has six segments:

- *Policy Goals:* A digest of the policy goals set by UN summits and other meetings.

- *Processes for Selecting Indicators:* A description of the expert group's approach, process of technical assessment and priority allocation (see economics report as an example).

- *Sub-Domain Structure:* A description of the key policy areas etc into which the domain was divided.

- *General Issues:* A discussion of: the overarching framework used by the expert group; any conflicts between national and international priorities; coverage of sub-domains, including any gaps and weaknesses; issues specific to sub-domains; relationships to major indicator sets and any significant issues; cross-cutting issues spanning several domains

- *Next Steps / Future Considerations:* Any advice from the expert group regarding the future maintenance and development of indicators in the domain.

- An annex listing the *members* of the expert group.

**Common Themes**

13.     Diverse as was the statistical subject matter addressed by the seven expert groups, the reports contain a number of common strands:

- Some expert groups amended marginally the definitions of indicators arising from summit conferences – this was generally done for consistency across the domain, to align the indicators with statistical standards or to address technical shortcomings of the original definitions.  Some groups would have liked to go further with some amendments, but limited the degree of departure from existing conference indicators.

- Most expert groups acknowledged that, while their assessments had regard to statistical indicators that would align with international policy goals, their consideration of national policy goals was necessarily partial, given the time

available.

- Some expert groups pointed to future possible expansions and enhancements of the indicator sets – for example, more systematic approaches to demographic decomposition analyses and including productivity and wealth measures among the economic indicators.  Also the policy goals that had been identified within a domain by reference to UN Summits and Major Conferences were not as comprehensive as those identified by the international agency with lead responsibility for a particular domain.  A glaring example of this is that no indicator of inflation has been identified by the UN Summits (except implicitly in measures of constant price GDP and growth) whereas most observers would recognise the importance of such an indicator in its own right. Taking account of a wider range of national and international policy goals is desirable.

- Some expert groups, while acknowledging the wisdom of concentrating on existing suites of conference indicators, believed that future work on the indicator set should look to emerging and future policy emphases.

- Most expert groups made some assessment of the availability (or feasibility of countries' compiling) the high priority indicators, but were not able to undertake a comprehensive assessment.

Provision for most of these issues has been taken into account in the recommendations for future process made in the main report.

# Terms of Reference for the Expert Groups

Each Expert Group should:

Consider the Indicators assigned to the Domain together with any additional indicators from the entire set under consideration that need to be included to produce a coherent assessment.

Identify as necessary Sub-Domains of indicators that are relatively self-contained and comprise a separate policy area.

For the Domain or each Sub-Domain identify a hierarchy of indicators as follows:

- A very small number of Indicators that would be the HIGHEST PRIORITY in any general set of indicators and which all countries would be encouraged to compile.

- A second tier of indicators that were important (for both national and internationally comparative purposes) within the Domain (or Sub-Domain) and which countries would consider with HIGH PRIORITY.

- A third tier of the remaining Indicators that may be DESIRABLE to gain a comprehensive picture of the situation (depending on national circumstances) and would be particularly important if policy in a particular domain was a strong national priority.

Whenever possible the intention is to identify the hierarchy of priorities to be consistent with existing sets of indicators (subject to any technical evaluation). When selecting highest and high priority indicators the expert group should use indicators included in the main high level sets unless there is an overriding technical reason for recommending an alternative:

- UN Minimum National Data Set
- OECD International Development Targets
- UNDAF Common Country Assessment Indicators
- World Bank Development Indicators

The expert group should comment on any apparent inconsistencies between the indicators chosen for inclusion in the above sets and recommend any reconciliation of these.

For the high priority indicators (first two layers) the expert group should assess:

- the suitability of the indicator to the policy objectives,
- the technical properties of each indicator including general levels of accuracy,

- general availability in a wide range of countries and
- use for national policies and priorities (where known).

Technical assessment materials prepared by the UNSD will be made available to support this work wherever possible.

Many indicators for international comparisons focus on outcomes (e.g. life expectation, literacy, poverty) and it is natural that they should. In some areas the indicator is a measure of input or output rather than outcome (e.g. educational enrolment rate). This may be the best surrogate for an outcome indicator. However, for developing and monitoring National Policies input measures may be more relevant (e.g. number of teachers trained to a certain level, proportion of births at which trained medical worker present). Expert Groups should take account of the nature of each indicator.

The expert group should also consider the frequency with which high priority indicators (first two levels) should be produced for making international comparisons and for monitoring change in each member state.

In some circumstances, even though the indicator might be considered as high priority, many countries may find the ideal indicator difficult to achieve (because of technical difficulties or full data availability for example). In these cases the Expert Group may wish to suggest an approximation (or even a sequence of approximations) that might be more feasible for countries to produce as a first step whilst aspiring to achieve the ideal.

The Expert Group should feel free to consult other experts including staff working in international agencies. The Chair of the Expert Group has the authority to co-opt additional members to the Group where this is considered necessary.

The form of the report from each expert group to the Friends of the Chair Group set up by the UN Statistical Commission should contain for each indicator the information required above. It should also provide any views over any related issues including the processes for assessing the technical properties of Indicators and for identifying priorities for indicators. The comments may include any general observations on each indicator separately or on the set of indicators as a whole.

It would assist the friends of the chair group if the expert groups were to provide a brief narrative about the criteria and the process that they found most beneficial to assess and prioritise the indicators.

# Short Reports of the Expert Groups

# 2.1 Report of the Expert Group on Demographic Indicators

**1.** **Policy Goals**

Information about population size and age structure, population growth, both current and in the future, for the country as a whole and sub-nationally is fundamental for decision makers. Thus, for example, rapid population growth can place a strain on the ability of a country to cope in many areas of economic, social and environmental significance. It is particularly important when population growth is not sustainable in terms of production, living standards, resources and so on. Likewise population growth in urban areas needs to be monitored so that unmanageable densities and population concentrations are avoided. High population growth requires accompanying infrastructure development. While these rather general goals exist, specific policy targets and goals such as model growth rates have not been set.

In contrast, policy goals for the other indicators in the Demography Domain are more specific. Not surprisingly many of them were articulated in the action plan from the International Conference on Population and Development, held in Cairo in 1994. Other major conferences which generated a substantial number of indicators and related policy goals were the World Conference on Women held in Beijing in 1995. (and Women, Gender Equality, Development and Peace for 21$^{st}$ Century held in New York in 2000) and the World Summit for Children held in New York in 1990. Also policy concerns, particularly on mortality, and accompanying goals resulted from the International Conference on Nutrition (Rome - 1992), the Conference on the Environment and Development (Rio - 1992), the World Food Summit (Rome - 1996) and the World Summit for Social Development (Copenhagen - 1995 and Geneva 2000).

In the detailed specific goals below, those which have an earlier end date than 2001 are excluded.

Demography / Health: Fertility / Reproductive Health

Fertility rates

> ICPD stressed the need for countries to facilitate the demographic transition where imbalances exist between demographic rates and social, economic and environment goals, for example - the provision of health services, education and employment. On teenagers, policy issues revolve around unwanted pregnancies and the need to promote responsible and healthy reproductive and sexual behaviour; as well as the need to provide appropriate services and counselling for adolescents.

> The policy goal for fertility is:

> Access by all couples to information and services to prevent pregnancies that are

too early, too closely spaced, too late or too many

Contraceptive prevalence rate

This measurement provides partial information on individual's efforts to control fertility, but more importantly in a policy context, it currently reflects the success of progress in providing access to reproductive health services, including family planning. The policy goal on contraception links in with the above goal for fertility.

Further goals include:

Universal access to safe/reliable contraceptive methods and increased access to family planning

To combat HIV/AIDS, malaria and other diseases and to have halted by 2015, and begun to reverse the spread of HIV/AIDS.

<u>Demography/Health: Mortality</u>

Life expectancy at birth

Mortality relates very closely to health conditions. The ICPD Programme of Action urged all countries to reduce mortality and morbidity and make primary health care universally available by the end of 2005. Life expectancy is a basic indicator that measures the outcome of health status and quality of life.

A specific goal is:

Expectation of life at birth to reach 70 years or over by 2005 and 75 or over by 2015

Under 5 mortality rate

The survival of a child is closely linked to the provision of primary health care services and a general goal of ICPD was to increase the accessibility, availability, acceptability and affordability of health care services and facilities. Poverty, malnutrition, a decline in breast feeding, poor sanitation and a lack of health facilities are all associated with high child mortality. There are significant variations between and within countries and regions and a major goal is to reduce the disparities in mortality rates between more developed and less developed countries, with particular attention to eliminating the pattern of excess and preventable mortality among girls.

The major specific goal is:

Reduce under 5 mortality rate to two-thirds of the 1990 level by 2015

Infant mortality rate

There are similar policy concerns for infant mortality to under 5 mortality, as well as being linked to the reproductive health of the mother.

A specific policy goal is:

Reduce the infant mortality rate by one-third of 1990 level and below 35 deaths of children under one per 1000 live births by 2015

(An earlier target, set in 1990 was a reduction of infant and under 5 mortality rate by one-third to 50 and 70 per 1000 live births respectively, whichever is less by 2000).

Maternal mortality rate (ratio)

This indicator, the ratio of deaths of women during pregnancy and childbirth, to the number of live births (taken to be a proxy for all pregnancies), measures the impact of maternal health programmes. The general policy goal is to improve maternal health.

The specific goal set by various conferences was:

Halving of 1990 levels by 2000 and a further halving by 2015 (or to reduce the rate by three quarters between 1990 and 2015.)

Specific cause mortality rates

These were covered by the Expert Group on Health, but are briefly mentioned here to complete the picture for the domain.

The goal to achieve a 50 per cent reduction in malaria induced mortality by the year 2000 and to combat malaria is linked to the fact that health and development are inter-connected. Malaria causes widespread premature death (and suffering) and holds back economic growth and improvement in living conditions (WHO)

The World Summit for Children set a goal of a 50 per cent reduction in deaths due to diarrhoea in children under 5. A reduction in diarrhoea incidence and mortality rates have a direct impact on sustainable development.

The reduction by one third in the deaths due to acute respiratory infections to children under 5 reflect the fact that such infections, particularly pneumonia, are responsible for a third of all deaths of children under five in developing countries, killing 4 million children each year.

## 2.      Processes for Selecting Indicators

The expert group followed a three-step process for selecting and attaching a priority to the demographic indicators, namely:

(i)  Indicators were grouped into broad families (Sub-Domains) and assigned initial priorities (then described as highest, higher and desirable)

Because of time constraints and because the number of indicators are relatively few compared with other Domains and relatively well developed, this initial task was carried out by the chair of the group.

The criteria used in forming the draft proposals were:

- consideration of the follow-up indicators emanating from the various UN Conferences (DOC E/CN.3/2001/16)
- consideration of the UN selected core indicator set (DOC E/2001/60)
- consideration of indicators published by various international (and national) bodies, such as Eurostat and the Council of Europe, the Population Reference Bureau, UN/ECE.
- consideration of the demographic data collected by international bodies, such as the common UNSD/Eurostat/Council of Europe questionnaire.
- selecting indicators that are widely available; that is produced or estimated by the vast majority of countries whether the source be vital registration, surveys, censuses, registers or some other administrative source.
- selecting indicators that are likely to be reasonably reliable and internationally comparable.
- selecting indicators that are available on a regular basis (not 'one-offs').
- selecting indicators that reflect the social and economic conditions of a country, in a broad sense, and as such have policy value and use.
- selecting indicators that give a 'snap-shot' picture of the demography of each country, particularly in relation to demographic transition.

The indicators were allocated to Tier 1, Tier 2 or Tier 3 by choosing a key measure for each major domain - population growth, population structure (current), fertility, mortality and morbidity. The aim of selecting domains was to enable the indicators in the three tiers to nestle into one another. Notes on the rationale behind the selection were attached to the draft proposals, covering key selected points on policy use, availability, source and reliability. The proposals were sent out on 18 July 2001.

(ii)      Members were asked to comment on the list of proposed indicators (deletions / additions/ amendments), on the priority ranking and on the notes.

The proposals were also sent to the chair of the Health Group.

Feedback was requested by 3 August. Responses from 10 countries and WHO were received. There was general support for the proposals, but, as expected several suggestions were made about revising the status of some indicators, about adding indicators, and about refining the definitions. Comments were also received about the processes, for example of producing the indicators and maximising comparability.

(iii)    Feedback considered and proposals re-drafted

All feedback was carefully considered, though the Chair took upon himself to make final decisions, particularly where there were conflicting views. A revised set of indicators was sent to Tim Holt and UNSD on 22 August. The status of some were revised in correspondence between Tim Holt and the Chair, in particular to reduce the number in Tier 1 to around 6 (to give a balance with the number for other topics).
8. The number and ranking were further revised to reflect comment from international organisations, particularly on the policy relevance of some of the proposed indicators. This was done in consultation with the Chair of the expert group. Members will find the final proposals on demography in the main report, An Assessment of the Statistical Indicators Derived from United Nations Summit Meetings. They are quite different from the initial proposals endorsed by members. In particular they are fewer.


## 3.      Sub-Domain Structure

The Sub-Domain structure for demography is not complicated. There is some overlap with health, particularly on mortality, and this is reflected in the headings of the hierarchy. Thus there are only three Sub-Domains, namely:

**Population Structures and Growth**
**Fertility and Reproductive Health**
**Mortality**

There are two main elements on <u>population</u>, population growth and the sex-age structures, both now and in the future. Indicators on the current picture were included in the highest group (Tier 1) in the initial proposals and endorsed by members, though there were more specific measurements than in the final proposals. Indicators on future population growth were included in the higher group (Tier 2) in the earlier proposals, while the percentage of the population living in urban areas was, and still is, included as desirable (Tier 3). In general the policy concern centres on population growth and sustainable economic and social development, whether the geography is the country as a whole or local areas (towns or urban areas).

Of the three indicators on <u>fertility and reproductive health</u> (total fertility rate, fertility rate for females aged 15-19 and the contraceptive prevalence rate), the total fertility rate was allocated to Tier 1 in the initial proposals, was endorsed with this ranking by members and appears in Tier 1 in the final proposals. It is a key measurement of fertility used

throughout the world as an indicator of declining average family sizes (and indirectly the implementation of family planning programmes and greater choice over parenthood) as countries move through the demographic transition. For developed countries, where the TFR is well below replacement level, it is an important indicator of a future ageing population and ageing workforce. The prevalence of contraceptive usage moved from Tier 3 in the original proposals to Tier 2 after consulting members, to Tier 1 in the final proposals given its importance as an indicator of providing access to reproductive health services, including family planning. The teenage fertility rate appeared in Tier 2 in the initial proposals and has retained this ranking throughout. Policy concerns relate to unwanted and unplanned pregnancies and the need to promote responsible and healthy sexual and reproductive behaviour and to provide services and counselling for adolescents. In developed countries a very high proportion of births to teenage mothers occur outside marriage or a stable consensual union.

On <u>mortality</u>, life expectancy at birth by gender is a key indicator of the general mortality situation. Differences over time and between sexes are universally monitored. As such it reflects health conditions and the availability of primary health care.

The infant mortality rate and under 5 mortality rate to some extent reflect the same type of circumstances - poverty, health care provision, malnutrition, education and life styles (eg smoking). While the under 5 mortality rate was in Tier 2 after consulting members, it now appears in Tier 1, while the infant mortality rate which was in Tier 1 after consulting members, appears in Tier 2 in the final report.

The maternal mortality ratio has remained in Tier 2 throughout. It is a far more difficult indicator to measure, because it requires information on the deaths of mothers in pregnancy and childbirth and can only use a proxy as the denominator. Nevertheless it is an important indicator of the impact of maternal health programmes.


## 4.      General Issues

There were no major issues. There was general consensus by the Group with the Domain Structure, the indicators and the ranking. No major gaps in the top groups (Tiers 1 and 2) were identified. Those concerns about definitions, measurement and sources were not, in general, major though they do need to be addressed. The vast majority of countries have sources, either statistical such as censuses and surveys, or administrative such as vital registration systems or population registers to provide regular, sometimes annual, information (counted or estimated). However, members did identify some more minor problems, for example:

- the definition of an urban area

- the problem of producing statistics on pregnancy related deaths of women (maternal mortality ratio)

- the difficulties of measuring international migration.

The initial set of proposals, endorsed by the Group, extended beyond indicators emanating from UN Conferences and Summits. These proposals are shown at Appendix 1. The reasons for this were:

- To anticipate emerging national issues, even though there is as yet no international stimulus to produce such indicators; for example single person households in which the person is aged 65 and over, international migration, mortality by specific major causes.

- In part this was because some of the Conferences date back to 7 years or earlier, and the world has moved on.

- To elaborate conference follow-up indicators; for example, to decompose average population change into its components - birth rate, death rate and net international migration rate. It was felt that some of this basic demographic information set the context for indicators in other Domains and also could provide some data if more refined indicators could not be calculated (for example, crude birth rate in place of total fertility rate).

- The need to set a framework against which future improvement could be assessed (benchmarked).

The process of refinement quite rightly eliminated some of the indicators which might be described as 'nice to know' such as cohort fertility and assumptions for national projections. Some such information is collected by international organisations, including the components of population change, and for many countries the data are published by the UN or Regionally. This raised the question of co-ordination.

Thus the process of selecting the indicators raised two issues, namely:

- The narrowness of the remit and the possible need to be more forward looking.

- The need to co-ordinate any separate work on producing an agreed set of indicators (particularly for Tiers 1 and 2) with current data collection exercises, and to a lesser extent current data dissemination undertaken by international bodies.

The Group also raised the issue about whether the indicators represented what should be collected or what should be disseminated. Put another way should the basic data be collected and the indicators computed centrally, or should nationally computed indicators be collected.

Behind this question is the issue of international comparability, though for national purposes, it is less relevant as long as the same method is used from year to year. The

issue highlights the need for international standards (or recommendations) on demographic indicators.

A further related point is the source. For example, an indicator estimated from a survey will have source differences from the same indicator computed from vital registration. The source will also help dictate the frequency of production. At the extreme, if an indicator is dependent on the Census of Population, then, for most countries, it will only be available every ten years.


**5.      Next Steps / Future Considerations**

In summary the general issues identified by the Group were:

- the rationale for the indicators: looking forward and across the Domains as well as looking back

- co-ordination of collection activities

- comparability between countries: common methodologies and priorities

- frequency of collection/production.

In taking forward the work it was generally felt that the process should be dynamic, recognising changing policy concerns and addressing the issues listed above. Much of this is, of course, embodied in the main report. However, to take the work forward, institutional arrangements need to be place - who does what, and how and when.

It was also felt that the final agreed hierarchy (for all Domains) should act as a framework for monitoring future progress; countries should be asked to provide the indicators, using the ranking (Tiers 1 to 3), as the priority order and a central monitoring should be carried out. This has resource implications both nationally and internationally.

# Members of the Expert Group on Demographic Indicators

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# 2.2 Report of the Expert Group on Health and Nutrition Indicators

## 1.     Policy Goals

Indicators of health and nutritional status are essential for the successful development, implementation and evaluation of policies and programs designed to improve the health at the international, national and local levels.  The importance of health status indicators is magnified by the strong inter-relationships between health and almost all other sectors of society such as education, employment and the environment. Health is affected by, but also affects, progress in these other areas. Improvements in health status will lead to a more productive work force and improvements in the standard of living will, in turn, lead to improvements in health.  Whilst the ultimate policy goals relate to health status, many of the statistical indicators are measures of inputs such as the provision of health services. These are important indicators of the implementation of health policies that are needed to achieve the ultimate improvement in health status.

While more global measures of health and nutrition are needed, and are appropriate, for monitoring overall changes and to monitor the effects of programs and policies that are implemented at the national level, most health programs are directed towards specific health or nutritional problems and are administered at the local level. This is clearly illustrated by the indicators that were produced by the UN Conferences.  General health measures were included in many of the indicator sets and there is much agreement on these indicators.  Many of the conferences, however, had a very specific focus and the indicators that were produced related to very specific interventions for specific health or nutritional problems.

The following specific areas were highlighted. Concern about the spread of HIV/AIDS was a focus of the Beijing Declaration, the Plan of Action for implementing the World Declaration on the Survival, Protection and Development of Children (1990) and the Millennium Declaration. Alleviation of hunger, in particular malnutrition of children, was an issue that was highlighted in the Millennium Declaration.  Many of the international conferences set goals on the reduction of malnutrition. The importance of access to health services, in particular reproductive health services, has been emphasized particularly in the International Conference on Population and Development.  Preventable childhood diseases and diarrhoeal diseases, pneumonia and other acute respiratory infections that can be prevented or effectively treated through relatively low-cost remedies were a focus of the World Summit for Children.

There remains the challenge of developing indicators that can be used to plan and evaluate specific programs as well as to monitor trends in general measures of health and nutrition.  As indicators at different levels of specificity will likely be needed, it is important that they be linked to the more general measures. The need for indicators that are comparable internationally also presents a challenge for health and nutrition.  Priority health concerns differ in some important ways between developed and developing

countries. It is important to identify indicators that are relevant at both the national and international levels.

## 2. Processes for Selecting Indicators

After convening the expert group on health and nutrition via email, an initial assessment of the indicators was completed and an Access database developed to help manage the large number (80 indicators) and broad array of indicators. The task of evaluating the indicators was complicated by the fact that the indicators were at very different levels of specificity. This was a result of the nature of the conferences that produced the indicator sets and the state of the art in monitoring health status. The first task was to categorize the indicators along several relevant dimensions where each dimension represented a different aspect of health. An advantage of this approach is that the indicators could easily be re-categorized along the different dimensions or by combinations of different dimensions. Users interested in specific areas would then be able to easily identify all the relevant indicators in those areas as well as those considered to be of higher priority. In many cases the indicators could be assigned to more than one category of a dimension, thus, the assignment of indicators to categories is somewhat arbitrary but was thought to still be quite useful given the large number of indicators under review.

The first two dimensions suggested were age and substantive area. Age was broken down into the following categories:

- Infants and Children less than 5 years of age
- Children and Adolescents
- Adults
- Reproductive Health (Women of Childbearing Years)
- All Ages

The categories that make up the second dimension, Substantive Area, where defined by the indicators and therefore the dimension is not comprehensive. The categories identified are:

- Health-General
- Health-Women's General
- Health-Obstetric Care
- Nutrition
- Health Care
- HIV/AIDS and
- Immunization

To illustrate the variability in numbers of indicators it is worth noting that there were 7 indicators dealing with HIV/AIDS and 18 dealing with nutritional status.

A third dimension that has been used to evaluate <u>Health Systems Performance</u> in Australia was added.  This dimension has the following categories:

- Health Status and Outcomes
- Determinants of Health
- Health System Performance

This dimension provides an additional perspective on how the indicators related to various aspects of the health care system as well as health status.

Once the indicators were defined according to this scheme, the inter-relationships among the indicators were investigated.  Some indicators were quite general in nature while others dealt with specific aspects of a more general indicator.  The relationship among indicators was taken into account when developing priority rankings.  Tables were created to reflect the priority order, the general categories, the final sub-domains (please see below), and whether or not indicators were recommended as OECD (International Development Targets), UNDAF (Common Country Assessment Indicators) and the UN Millennium Declaration.  Indicators can be sorted by major heading, age, substantive area, and health systems, as well as by priority ranking within each of these groupings.

### 3.      Sub-Domain Structure

The indicators in each category of the three dimensions were first placed in one of three priority groups (highest, high, and desirable).   Indicators were then sorted according to priority and re-evaluated to determine that the rankings were appropriate.  An examination of the indicators within the priority groups suggested that the indicators fell into five broad, cross-cutting groupings which reflected parts of each of the three original dimensions.  These five groups represent the final sub-domain structure:

> **Mortality**
> **Fertility (and Reproductive Health)**
> **Health Status (and condition-specific indicators) and Health Behaviors**
> **Immunization**
> **Access to Care**
> **Nutrition**.

### 4.      General Issues

The expert group on health and nutrition was assigned a formidable task.  In addition to the approximately 80 indicators included under this heading, it was necessary to also consider 7 of the indicators in the demographic group as these are generally considered core health indicators.

After much deliberation among the members of the Group and the Friends of the Chair Committee, seven indicators were considered to be of the highest priority or "Tier One"; one in the second tier of importance, and the remaining eight were considered "Tier Three" indicators within the Health and Nutrition Domain. Of the identified Demographic indicators that relate strongly to health, four were considered to be "Tier One," four in "Tier Two," and two in "Tier Three." Many of the remaining indicators were quite specific and did not meet the criteria for inclusion in the top three tiers. There was great interest in keeping the number of high priority indicators small and, as a result, the more specific indicators were not included in Tiers One, Two or Three if a more general indicator was included although this is not universally true. In some cases, a very specific indicator was considered important enough to be included at a higher priority level. However, it is still important to retain the large number of remaining indicators especially when more specialized health data collection systems are being planned nationally and internationally.

While the number of indicators was quite large and, in some cases, the indicators quite specific, there was considerable concern that some important aspects of health and nutrition were not being addressed. For example, there are no measures of mental health. The committee generated a list of approximately 15 additional indicators that should be evaluated for inclusion in any final list of priority health and nutrition indicators. This listing is by no means definitive, as the group did not take on the specific task of identifying gaps in the indicator set. The indicators suggested are ones that came up during deliberations and give an idea of the kinds of indicators that might be added. Many address health problems of concern to more developed countries. It should be noted, that the final set of high priority indicators cannot be viewed as being comprehensive of all important aspects of health and nutrition.

Balancing the needs of developed and developing countries in determining priority rankings was a challenge. Many indicators are clearly of importance to all countries, and these were straightforward to handle. In other cases, indicators refer to health issues that are clearly more important to one group of countries than another. Balancing these needs in the indicator list is a difficult task.

The group did not directly address the feasibility of collecting the data needed to obtain the indicators. This clearly needs to be done, and, in some cases, the difficulty of obtaining information for a high priority indicator placed it in a lower priority group than was desired. Additional work will also be needed to clarify how some the indicators are to be measured. There was often agreement that a concept was extremely important but less agreement on how it could be measured.

The issue of the relationship among the indicators also deserves more attention. For example, the indicator list includes a measure of malnutrition as well as energy supply. These are different but related measures. Should both types of measures be included in the highest priority category? How should availability of data affect which indicator is given priority? Perhaps a priority listing could be developed that would directly address

these inter-relationships.  Similar issues arise for the many mortality indicators included.  Unfortunately, the expert group did not have time to address these issues.


**5.      Next Steps / Future Considerations**

The most important next step is an extensive technical evaluation for all of the indicators, including cost of measurement, data needs, and policy implications.  In addition, there needs to be some way to look at the internal structure of some of the indicators that were not included in the top three tiers.  It is also important to make the indicator set more comprehensive and develop indicators where there are significant gaps.

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## 2.3 Report of the Expert Group on Environment and Energy Indicators

### 1.     Policy Goals

Many of the indicators in the environment and energy domain arose from the United Nations (UN) Conference of Environment and Development in Rio de Janeiro in 1992 (the so-called Earth Summit) and the remainder were from other major conferences in the last decade.  The indicators correspond to policy goals and targets that have been declared and endorsed by these meetings to address environmental concerns and related social and economic issues.  They have been assigned to 7 sub-domains in respect of these policy areas.

Environmental concerns are manifold.  There are threats to the climate system, the ozone layer and biodiversity as well as problems such as land degradation, deforestation, desertification, pollution to seas and oceans, over-fishing, spread of hazardous chemicals, water shortage and waste generation.  All these can have adverse effects on human health.

Global population and economic growth will continue to exert pressure on the environment and there is an urgent need to establish sustainable production and consumption patterns worldwide.  Environmental concerns have to be integrated in industrial, agricultural and forestry policies, in the energy and transport sectors, and in urban and regional development strategies.  This integration is an important element in an effort to decouple resource consumption and environmental exploitation from the rate of economic expansion and to move towards sustainable development.

Indicators in the Environment and Energy Domain can serve not only a wide range of policy goals that addresses environmental concerns.  They can also be used to support the integration of environmental concerns in sectoral and economic policies, as well as to measure progress towards sustainable development.  While some of these indicators apply to selected regions, the majority is globally applicable.  This is because similar environmental concerns exist across countries and many environmental problems, wherever originated, have worldwide implications.  Therefore, most environmental policy goals need to have international commitment to be achievable.  Details of policy goals, standards and targets are provided in the technical evaluation for each indicator.

### 2.     Processes for Selecting Indicators

The expert group on Environment and Energy indicators was convened under the chairmanship of Hilary Hillier from the United Kingdom.  The objective was to establish a group representing a wide range of countries representing different geographical and climatic regions and economies at varying stages of development.  In the event, group members were found from Africa, Europe, North America, Asia, and Australasia. Group members are listed in Annex A.  All communications between members of the group, and

between the group and the UN secretariat, were via e-mail or telephone.

Priorities were not assigned to the different sub-domains, because the importance of particular issues varies considerably from country to country, depending on factors such as stage of development, geography, climate, dependence on agriculture or other resources etc.

For many economic and social issues, indicators are closely correlated so that one can stand as proxy for others, and there is a natural hierarchy among the indicators - some indicators relate to small subgroups of the population, for example.  However, there is not in general a similar correlation or hierarchy for environmental indicators.  Although in a particular country it may be possible to assign priorities between, say, air and water quality and biodiversity, it is not possible to do so at a global level.  Some issues, like emissions of greenhouse gases, are of global significance; other issues like air or water pollution are more local, but nevertheless important in terms of human health - and there is increasing recognition of the cumulative and cross boundary impacts of local pollution.

An important input to the assessment was the technical evaluation sheets provided by the UN Secretariat, which described each indicator. The group did not have time to conduct any comprehensive survey of countries regarding the uses of these indicators.  The group's assessment is therefore based on members' existing knowledge, augmented by limited discussion with other countries.

A set of criteria was agreed for establishing priorities among the indicators.  They are based on those outlined in the terms of reference and are as follows:

- importance of the issue
- relevance of the issue to most countries' national strategies
- existence of an international agreement or agreed target or commitment
- how well the indicator reflects the issue
- technical feasibility and existence of standard methodology
- data availability in most countries
- data quality and international comparability
- whether the indicator is used in a number of different sets - in particular the cross conference indicator sets
- sensitivity of the indicator to policy intervention
- whether interpretation of the indicator straightforward - for example, is it clear in which direction it ought to move, including across a range of countries at different stages of development.

Members of the expert group each categorized the indicators according to the criteria above, using a numerical scale of 0-5 for each indicator.  Although the resulting scores were somewhat subjective, nevertheless a clear hierarchy began to emerge over those indicators regarded as of highest priority.

On the whole, indicators in the atmosphere sub-domain were given a higher score than

indicators in the other sub-domains. However, this was generally because the availability and quality of information was felt to be better, rather than because of an intrinsic priority between the sub-domains. There is also more agreement about the indicators in this sub-domain. There were other issues, for which two or more indicators were rather similar, and there was a consensus over the issue being important, but not necessarily over the choice of a specific indicator - this was particularly the case for energy and waste indicators. More time is needed for consideration and development of the various indicators and methodologies.

## 3.     Sub-Domain Structure

There were 46 indicators initially assigned to the environment and energy group. The first stage of the assessment was to divide these into broadly similar sub-domains within the environment and energy domain.

Many of the environment and energy indicators arose from the UN Conference of Environment and Development in Rio de Janeiro in 1992 (the so-called Earth Summit). Following this conference, a process has been put in place by the UN Commission on Sustainable Development (CSD) to develop and pilot various indicators. The CSD, after some years' work, has proposed a set of 6 themes, each divided further into up to 4 sub-themes, covering environment and energy indicators. The CSD themes cover, broadly, individual environmental media (air, water, land) and resources.

The expert group agreed that it would be sensible to use the CSD themes rather than to propose a further set of sub-domains, and that it would be appropriate to define "sub-domains" equivalent to the theme level of CSD. There was a further small group of indicators assigned to the expert group, which were not statistical but institutional. These were included as a separate sub-domain.

The final structure consists of 7 sub-domains:

> **Atmosphere**
> **Land**
> **Oceans, Seas and Coasts**
> **Fresh Water**
> **Biodiversity**
> **Consumption and Production Patterns**
> **Institutional and Other.**

## 4.     General Issues

The overarching framework for the environment and energy domain of indicators closely resembles that proposed for all the domains. It contains 7 sub-domains and three priority tiers, it is arranged to reflect the major environment and energy policy areas.

Environment and energy policy concerns are diverse and there are specific issues for each sub-domain and indicators. These are detailed below.

**Atmosphere**. There was almost universal agreement that the two indicators emissions of *carbon dioxide* and *emissions of greenhouse gases* should be included in the highest priority set; carbon dioxide emissions were felt to be methodologically slightly easier, and also directly related to the Kyoto process, but in the longer term, the more comprehensive emissions of greenhouse gases would be preferred. Local air quality as measured by *ambient concentrations of pollutants in urban areas* is also thought to be of highest priority. There were two slightly different indicators proposed for this by UNCSD and by UNCHS - both proposing using the annual mean concentrations of key pollutants or days when WHO standards are exceeded, but the UNCSD - proposed indicator covers a slightly wider range of pollutants, which is preferable in the longer term. *Consumption of ozone depleting substances* was also felt by the expert group to be of very high priority. However in the interests of balance between the sub-domains, these last two indicators were was placed in the second priority category.

**Land**. The importance of issues in this category is particularly variable from one country to another. Nevertheless, generally the issues of forest loss and desertification were felt to be globally significant. There were three separate indicators originally proposed relating to forest loss: *forest area as a percentage of land area*, *percentage change in km2 of forest land in past ten years*, and *wood harvesting intensity*. The first two of these were felt to be essentially the same indicator, as it is assumed that each indicator will be monitored over time, so it was agreed that these two be merged. Wood harvesting is only one potential contributor to forest loss, so was felt to be a high priority indicator. *Land affected by desertification* was also considered to be an important issue, but only in some countries. There was general agreement that the importance of agriculture should be reflected in the indicators, but recognition that this is a difficult issue. Four different indicators were initially proposed: *agricultural population per hectare, arable and permanent crop land area, use of fertilizers, use of pesticides*. Agricultural population per hectare was felt to be largely a contextual indicator (although large changes in value could be very significant). Change in arable and permanent cropland area was also not an ideal indicator - it only partially reflects certain aspects of agriculture, and not the quality of any changes taking place. Use of fertilizers and pesticides both suffer from difficulties of measurement. Further work is needed to develop better indicators of the impacts of agriculture. The area of urban formal and informal settlements was also felt to be more of a contextual indicator, and not particularly useful in environmental terms - it may be more relevant to the health domain. Another indicator proposed in this sub-domain was *livestock stocking rates*. This is a measure of the intensity of agricultural production, and was assigned to the high priority group of indicators.

**Oceans, seas and coasts**. It was generally agreed that marine pollution in coastal areas was an important issue, and that *algae concentration in coastal waters* was a good reflection of this. Over-fishing is internationally of great concern, but does not affect all countries, nor does *annual catch by major species* , for any individual country, reflect the issue when fishing fleets fishing a particular stock may come from many, sometimes

remote, countries.  What is relevant is the total catch, in relation to the size of the stock. *Percentage of population living in coastal areas* was thought to be a contextual indicator. And in some areas, it is not the resident population, but pressures caused by tourism, which are an important issue.

**Fresh water.**  *Population with access to safe drinking water* was thought to be a highest priority indicator, and also highly relevant to the health domain.  *Percent of population with adequate sewage disposal facilities*, *waste water treated* and *concentration of faecal coliforms in freshwater* were all proposed to reflect the issue of sewage treatment.  The output indicator percent of population with adequate sewage disposal facilities was slightly preferred, and is also relevant to the health domain.  Concentration of faecal coliforms is an outcome indicator, and is less easy to measure and make comparable between countries. Biological oxygen demand is also an important indicator of freshwater pollution but less readily measurable.  Two indicators were initially proposed in relation to water supply and demand; *annual withdrawals of ground and surface water* and *water consumption*, but neither could be highly recommended by the group.  The issue of water supply and demand is a very difficult one to measure through indicators - in many areas, the main supply is a river which may run through a number of countries; water is recycled and may be reused a number of times.  Even in countries with well-developed statistical systems no very satisfactory indicators in this area have been produced and this is an important issue, which needs further work and development.

**Biodiversity**.  There was universal agreement that *protected area as a percentage of total area* is a very high priority indicator, but nevertheless group members cautioned that the quality of the area, and the efficacy of its protection, are also important elements which are not currently included in this indicator.  *Area of selected key ecosystems* and *abundance of selected key species* were also felt to be important indicators, but they are less readily measurable, and of course are not comparable between countries, so are not recommended for the highest priority indicators.

**Consumption and production patterns**.  This was the largest sub-domain, comprising 15 indicators covering energy, waste, materials use and transport.  This was the area in which the group had most difficulty in reaching a consensus.  It was clear that the issue of energy use is felt to be very important, but there are a number of indicators reflecting various aspects of energy use.  In general, it is not energy use per se which is environmentally damaging, but the impacts of energy use, primarily as reflected in the carbon dioxide emissions or greenhouse gas emissions indicators.  And while wasteful use of energy in some developed countries is a problem, the lack of availability of energy in developing countries is a constraint on their development.  In general, the most relevant measures were felt to be *energy use per unit of GDP,* which is a measure of the efficiency of use of energy and *share of consumption of renewable energy sources.*  A suite of indicators on energy intensity in various sectors - *manufacturing, commercial, transportation, residential,* were generally felt to be second order indicators.  There were several indicators proposed on waste, including *generation of hazardous wastes*, *generation of radioactive wastes*, *generation of industrial and municipal wastes*, *rate of waste recycling and reuse* and *solid waste disposal.*  The waste issue was felt by the

group to be very important, but data are not generally available and are hard to collect and unreliable, even in countries with more developed statistical systems. There were two other indicators in this group: intensity of material use was felt to be an important issue in relation to the efficiency of use of materials other than energy, but methodologically difficult and having problems of data availability. There were only two transport indicators included in the environment and energy set, the one mentioned above on *energy intensity of use in transportation*, and *distance traveled per capita by mode of transport*. While the issue of transport was felt to be important, neither of these two indicators was felt to quite capture the issue. Further thought needs to be given to this area, but the group did not have time to consider it fully.

**Institutional and other indicators**. There were three indicators assigned to this expert group, which did not fall within the other sub-domains. The first two are not statistical - they are *National Sustainable Development strategy* and *Implementation of ratified global agreements.* Both of these were felt by the group to send an important signal to national governments about the actions needed, although for the former it was pointed out that it is not just the writing of a strategy which is important, but the involvement of the various stakeholders in the process, and the implementation of the strategy once agreed. The final indicator, *human and economic loss due to natural disasters,* was agreed to be quite important, but not necessarily an environmental indicator. While environmental policies may minimize the impacts of natural disasters such as floods or landslides, the preparedness of communities to deal with other disasters is more an economic and a planning issue than an environmental one.


## 5.      Next Steps/Future Considerations

The time given to this exercise was very short - only a couple of months, which included the time needed to identify and contact group members. This has meant that the consideration of the indicators, and further consultation with other countries and experts, has been limited. While this exercise has been very useful, we think it should be regarded as the start of an ongoing process of discussion and review of the indicators, not as having come to a final conclusion.

The rationalization and ordering of the lists of indicators should at the very least provide a checklist, which future conferences - or those proposing indicators for other purposes - should consider carefully before proposing alternative or additional indicators.

Unlike economic and social indicators, environmental statistics and indicators have only recently been considered in many countries, and even in the most developed countries there are issues for which ideal indicators have not yet been produced. However, environmental issues are so important that the group feels it would be a mistake to omit them from the highest priority measures. There is always a danger in developing indicators that we highlight in particular those issues, which can be readily quantified, sending an implicit signal that other issues are unimportant.

Also, unlike most economic and social indicators, it is usually not the national statistical office which has the necessary expertise, or which collects the data.  Often, these are collected by environmental regulatory agencies or policy departments or academic institutions or NGOs or other bodies outside government.  It is important for the national statistical system to recognize this, and to involve these other bodies in partnership over data collection and indicator development.

Ultimately, it is the outcomes of policies, which we need to measure.  However, in many cases, it may not be easy to measure outcomes (for example, in relation to biodiversity) or it might take a long time before outcomes are affected (in relation to global atmosphere, for example).  It may be more appropriate therefore to monitor inputs or outputs as intermediate or proxy measures.  The group has proposed a mix of different types of indicators in the highest priority group - in particular, the biodiversity indicator, _protected area as a percentage of total area_ is an output measure rather than an outcome measure.  Longer term, it will be important to measure the outcomes more directly.

However, indicators do send important signals about actions, which need to be taken.  For example, having a process to develop an environmental or a sustainable development strategy, involving consultation with stakeholders, is an important action for countries to undertake, and reflecting this process in an indicator sends an important message to countries.

The group considered that there were areas - particularly the impacts of energy, transport, and agriculture - which are not well covered by existing proposed indicators.  Further work is needed on these issues in a longer time scale.  Other international organizations - including Eurostat and the European Environment Agency - have done useful work on these areas, and it may be useful to draw on their expertise in future discussions.

While ideally it would be possible to compare indicators between countries, in the environmental field this is not always possible or relevant. As stated before, countries differ enormously in their geographical location and situation, their topography, their climate, their size (land and population) and their stage of development, as well as the extent to which their economies may be reliant on exploitation of natural resources.  Standardizing the indicators in some way - for example by expressing them per capita, or per unit of GDP, or per unit of area - is not necessarily appropriate or sensible.  It is important to encourage countries to track and report trends over time in the highest priority indicators, but it may not be appropriate to compare one country with another, except in the broadest sense.  The issue of burden sharing - for example in relation to emissions of carbon dioxide and other greenhouse gases - is a politically highly sensitive one, and until these matters have been agreed internationally at the political level, it is more important for the statisticians to focus on methodology of measurement of the emissions themselves.

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## 2.4 Report of the Expert Group on Economic and Poverty Indicators

**Policy Goals**

The following table shows the policy goals established for the economics and poverty domain by the various UN summits and conferences.

| Indicator | Target / Standard / Goal |
|---|---|
| GDP per capita | National targets are generally oriented towards priorities, availability of resources and historical economic performance.   International targets are most often set by financial institutions and international organisations only for the purpose of intercountry comparisons of economic performance in determining the direction of aid distribution or resource allocation projects. |
| GDP per unit of energy use | Reverse current trends in the loss of environmental resources at both global and national levels by 2015.  [DAC]<br><br>Ensure environmental sustainability.  [MD, Goal 7]<br><br>Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources. [MD, Target 9] |
| Poverty headcount ratio :  Percentage of population below the national poverty line | Reduce the proportion of the population living in extreme poverty by at least one-half by 2015. |
| Poverty headcount ratio :  Total population below the national poverty line | Reduce the proportion of the population living in extreme poverty by at least one-half by 2015." |
| Poverty headcount ratio : Percentage of population below $US1 per day | Eradicate extreme poverty and hunger.   [MG, Goal 1]<br><br>Reduce the proportion of the population living in extreme poverty by at least one-half by 2015.<br><br>Halve, between 1990 and 2015, the proportion of people whose income is less than 1 Dollar a day.  [MD, Target 1] |
| Poverty headcount ratio : Percentage of population below $US2 per day | Eradicate extreme poverty and hunger.   [MG, Goal 1]<br><br>Reduce the proportion of the population living in extreme poverty by at least one-half by 2015. |
| Poverty headcount ratio : Percentage of population below | Reduce the proportion of the population living in extreme poverty by at least one-half by 2015. |

| | |
|---|---|
| $US14.40 (1985 PPP$) per day | |
| Poor households | Reduce the proportion of the population living in extreme poverty by at least one-half by 2015." |
| Poorest fifth's share of national consumption | Eradicate extreme poverty and hunger.   [MG, Goal 1] |
| Poverty gap ratio | Eradicate extreme poverty and hunger.   [MG, Goal 1]<br><br>Halve the poverty gap ratio between 1993 and 2015 - this indicator should be under 5% by 2015. |
| Total overseas development assistance given or received as a percentage of GNP | Total ODA from developed countries should be at least 0.7 % of GNP. |
| Expenditure on research and development as a percentage of GDP | For African countries:  African countries should devote 1% of their GNP to R&D by 1995.  Each African country should allocate at least 0.4-0.5% of its GDP to research by 2000. |
| Local government revenue and expenditures | Ensure transport, accountable and efficient governance of towns, cities and metropolitan areas. |

## 2.      Processes for Selecting Indicators

The expert group followed a five-step process for sieving and attaching priorities to the economic and poverty indicators:

(i)      The existing indicators were grouped into broad families (or "subdomains").  The grouping was applied to the indicators proposed by various conferences and international agencies.

(ii)      Initial priorities were assigned to the subdomains.  Ultimately, the Expert Group was required to identify indicators that are highest priority, high priority and desirable.  It was thought helpful, however, to attach priorities to the subdomains first.

(iii)      Members were polled to see whether any important subdomains were missing, then initial priorities were assigned to them.  When establishing the priorities for indicators, the Expert Group had regard to: consistency with existing sets of conference indicators; suitability of the indicators to national and international policy objectives; technical properties of the indicators; and availability.

(iv)    The indicators within each subdomain were examined and priorities were attached.

(v)    Where the existing indicators appeared not to provide adequate coverage, the Expert Group proposed a new indicator.


## 3.    Sub-Domain Structure

The Economics and Poverty domain was divided into eight sub-domains:

**Economic Resources**
**Distribution / Inequality**
**Poverty**
**Saving and Investment**
**International Trade and Investment**
**International Development Assistance**
**Particular Components of Expenditure, Income and Production**
**Inflation**


## 4.    General Issues

Overarching framework

The recommended indicator set was intended to support monitoring of overall economic resources, the distribution of economic resources and key factors that affect the health of the economy or the prospect of future improvements in economic welfare.

Broadly, the expert group's choice of indicators was informed by:

- Standard macroeconomic presentations and economic accounting frameworks. (These were relevant to the indicators of economic resources, saving and investment, international trade and investment, and inflation.)

- Emerging standards for household income statistics and analyses of distribution, such as the Canberra Group's recommendations. (These were relevant to the indicators of distribution/inequality and poverty.)

- Standard international practices for monitoring policy goals. (These were relevant to the indicators of international development assistance.)

Conflicts between national and international priorities

The expert group was unable, in the time available, to assess the applicability of the recommended economics and poverty indicators to national priorities. National priorities

have been taken into account only insofar as they informed the choices of indicator sets by the various UN summits and conferences.

That said, the expert group believes that the indicators assigned highest (Tier 1) and high (Tier 2) priority are of the kind that almost all countries refer to when designing and assessing economic development policies. GDP, saving, investment and trade are cases in point. Other indicators assigned lower (Tier 3) priority are used by most countries as contextual indicators (eg, inflation) or as links between economic activity and key social indicators (eg, health and education expenditures).

Almost all countries would pay attention to indicators of poverty and (more broadly) the distribution of economic resources. As to the particular poverty and distributional measures chosen, there is some variation between countries. Thus the recommended indicator set includes both country-specific indicators (eg, proportion of population below the national poverty line) and international-standard indicators (eg, proportions of population with income lower than $US1 and $US2 per day). If a national standard is used, the metadata accompanying the indicator must explain the definitions and methodologies used.

Some indicators that are of particular importance to some countries are not included in the indicator set recommended by the expert group. Cases in point are city product and local government revenues and expenditures. The importance of these indicators depends on the demographic or institutional characteristics of particular countries, rather than being generally informative for all or most countries.

While not an issue regarding national versus international priorities, the expert group did engage in some discussion about whether the technical specifications of the indicators should be such as to assist intertemporal analyses within individual countries or cross-country comparisons. This question arose, for example, when choosing a real GDP measure. The expert group favoured PPP conversion as a long-run option for cross-country comparisons, but recognised that for some countries PPP conversion may not be available at present, and exchange-rate conversion may be the only short-run option. For intertemporal analysis within a single country, simple deflation in own-currency terms may be undertaken.

Coverage of sub-domains

The expert group is of the view that, given the constraint on the number of indicators that could be included, the recommended set provides a reasonable coverage of the economics and poverty domain.

Some important aspects of economic life -such as employment and unemployment-- were not included in the recommended set, but they are covered by other domains.

In the long run, the expert group believes that a set of economic indicators should include measures of wealth, the distribution of wealth and productivity. It is recognised,

however, that not many countries are able to compile such indicators at present, so they have been omitted.

<u>Sub-domain specific issues</u>

*Economic resources.*  Some members of the expert group were of the view that indicators of social as well as private goods should appear in the indicator set; but these too were thought more suitable for longer term statistical development.

*Distribution and poverty.*  The expert group acknowledges that there is a very wide variety of distributional measures, some more suitable for given analytical and monitoring purposes than others.  It has not been possible to include everyone's preferred measure in the recommended indicator set.  But a variety of commonly used (and widely available) indicators has been included.

*Overseas development assistance.*  Although the expert group generally favoured GDP as the denominator of ratios, the recommended indicator here is ODA as a proportion of Gross National <u>Income</u>.

<u>Relationships to major indicator sets and any significant issues</u>

On the whole, the expert group has recommended indicators that already appear in the indicator sets established by UN summits and conferences.  The technical specifications of a small number of indicators have been varied slightly from those in some conference sets, in the interests of greater consistency.  For example, GDP has generally been used as the denominator of ratios.

<u>Cross-domain issues</u>

Some indicators included in the recommended set for the economics and poverty domain are also relevant to other domains.  For example:

| Indicator | Other relevant domain |
|---|---|
| Government expenditure on health as a proportion of GDP | Health and Nutrition |
| Government expenditure on education as a proportion of GDP | Education |

Some indicators included in the recommended sets for other domains are also very important to an understanding of economics and poverty.  For example:

| Other domain | Indicator relevant to economics and poverty |
|---|---|
| Environment and Energy | Energy use per unit of GDP |
| Employment and Labour | Unemployment rate Employment rate Value added per person employed |

**5.       Next Steps / Future Considerations**

Develop PPP-based indicators

As noted above, the expert group favours PPP conversion as a long-run option for cross-country comparisons. The expert group notes the development of a project proposal for a revamped International Comparison Program, which will be discussed at the UN Statistical Commission meeting in March 2002. It is hoped that the international statistical community can agree on a proposal and funding which will result in the availability of purchasing power parities suitable for the international comparisons required.

Future inclusion of wealth indicators

The expert group believes that countries should aspire in the longer term to compile a national and institutional sector (especially household) balance sheet. This should be supplemented by some understanding of the distributional aspects of wealth. The expert group acknowledges that this aspiration goes well beyond the statistics currently available for most countries, and would demand long-term development of statistical capacity for many countries.

Future inclusion of productivity indicators

The expert group believes that countries should aspire in the longer term to compile productivity measures. A first practical step would be to compile labour prodictivity measures (preferably based on hours worked rather than employment).

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## 2.5 Report of the Expert Group on Employment and Labour Indicators

### 1.    Policy Goals

One of the characteristics of labour market statistics that distinguishes them from other fields of statistics is that they form a bridge between social and economic statistics. Labour market statistics belong in the social statistics field by virtue of the fundamental role that employment, or the lack of employment, plays in the economic and social well being of individuals and their families.  Labour market statistics belong in the domain of economic statistics because of labour constitutes the single most important factor of production in generating the output covered by the system of national accounts.

This duality is neatly illustrated by the unemployment rate which, in industrialised countries at least, is probably one of the most widely known and intensely studied of all indicators.  Changes in the unemployment rate are correlated with a host of measures of change in social statistics including the level of average income, the degree of inequality in the distribution of incomes, and changes in the outlays of a variety of governmental social assistance programs, to name a few.

On the economic statistics side, changes in the unemployment rate are associated with changes in GDP, in the rate of bankruptcies, in consumer confidence (and hence spending), and so forth.  The setting of monetary policy depends to a significant degree on reported changes in employment and unemployment.

A product of this social/economic duality is that indicators describing the performance and characteristics of the labour market serve a wide range of *both* social and economic policies.   This richness of policy applications made the group's work in setting priorities all the more challenging.

The normative interpretation of many labour market statistics is unambiguous making their application to policy goals straightforward.  Starkly put, policies aim to maximise employment and minimise unemployment.  For any given level of employment, policies aim to improve the quality of jobs, that is, their wage rates, their hours, their stability and their working conditions. To improve the quality of the jobs workers can obtain, policies aim to ensure that workers are well educated and trained.  Macro economic and industrial policies serve to create the kinds of jobs for which workers have been educated.

### 2.    Processes for Selecting Indicators

The group conducted all of its deliberations by e-mail.  The first task was to divide the indicators into sub-domains, largely reflecting the fundamental dimensions of labour statistics outlined in Section 5.1 ("Overarching framework") below.

Once the process of assigning priorities began, each member independently applied the established technical assessment criteria to come up with a priority for each of the 35 indicators with which it began its deliberations. (At that point, every indicator had to be assigned to one of three levels, namely, "highest", "higher" and "desirable".)

The convenor then tabulated the distribution of assigned priorities and using a system of simple weights, reflecting the three levels of priority. This resulted in , a score for each indicator. These scores then yielded an ordinal ranking of the 35 indicators reflecting the group's assessment of the relative merits of all of the indicators. The group was aware of the need to ensure that the sub-domains were all adequately covered so that the interrelationships among the domains were supported. As it turned out, the ordinal ranking itself yielded a reasonable allocation across the sub-domains.

Having this score-based ranking was very useful during the meeting of the Friends and the convenors in New York in October. It allowed this group's convenor to respond to proposals for changes to the allocation of priorities, and to the application of the new priority classification in a way that reflected the preferences of the entire group.


## 3.     Sub-domain Structure

The indicators given to the group were largely derived from the Key Indicators of the Labour Market (KILM) developed by the International Labour Organization. (The impetus for KILM project, the group was advised, can be traced to the Copenhagen Summit –1995.) With the exception of a few indicators expressly mentioned in conference reports (as identified in the Friends of the Chair report) it was not possible to link the indicators to the policy goals articulated at major conferences.

Labour market statistics represent a system of statistics that bears some resemblance to the system of national accounts in that there are logical conceptual relationships tying them together. The sub-domains that the expert group chose reflected the fundamental properties outlined in Section 5.1, with the result that combinations of indicators from different sub-domains are required to address some policy issues. In other words, it is not always possible to describe the policy relevance of the indicators in a single sub-domain.

**Labour supply indicators**

This group of indicators describe the population from which the labour force is drawn, or the proportion of the supplying population which is active in the labour force. For policy purposes, increases in the labour force participation rate are generally associated with improving labour market conditions (and vice versa). For policy purposes, it is frequently of value to calculate the rate for specific age and gender groups. For example, the convergence of the rates of males and females is a standard measure of the effectiveness of gender equality initiatives. In industrialised countries, the declining participation rate of older males has been a major policy concern reflecting, for example, the costs of pensions and the impending shortage of skilled workers.

The two Tier 3 indicators, may require some explanation to fully appreciate their policy relevance. They concern the proportion of the population with tertiary education. Those aged 25-29 (when most people have completed their formal education) represent the educational attainment of the potential flow into the labour force, while those aged 15 and over represent the stock. The difference between the two proportions signals the rapidity with which the educational attainment of the stock will increase in the future.

**Labour utilisation indicators**

These convey information about the extent to which the available supply of labour is being utilised by the economy. Given its wide-spread use, hence familiarity, the policy relevance of the ILO comparable unemployment rate hardly needs to be articulated beyond what was said above in the context of social and economic statistics. What does require attention is the limited relevance of the ILO unemployment rate in those developing countries that have low average incomes, substantial informal sectors, and almost non-existent social safety nets. Under these conditions, securing employment, however poorly compensated, is paramount. The time required to search for a suitable is unaffordable. The result can be lower unemployment rates in countries with low and declining incomes than in countries with much higher, and growing incomes. Although not universally applicable, the importance to policy development in all industrialised countries warranted the inclusion of the ILO unemployment rate in Tier 1.

The long-term unemployment rate simply serves to aid in the use of the overall unemployment rate as a policy variable. Specifically, the greater the proportion of the unemployed in long-term unemployment, the higher the economic and social costs associated with a given unemployment rate.

The unemployment rate by educational attainment signals the consequences of unemployment for the public and private returns to investments in education. It can also signal a country's vulnerability to losing its best educated workers through emigration.

The youth unemployment rate is an indicator of the efficiency of the school to work transition. (Exclusion of full-time students increases this indicator's suitability for this purpose.) The higher the youth unemployment rate, the longer it takes young people to begin the on-the-job acquisition of skills.

Time-related underemployment (Tier 3) addresses the fact that with the unemployment rate, a person looking for part-time work is counted as unemployed, while a person working part-time but looking for full-time work is counted as employed. Both constitute the underutilisation of available labour. Therefore, this indicator, when used in conjunction with the unemployment rate, provides a more complete measure of underutilisation.

**Distribution of labour**

Employment proportions by sector are the most simple indicators of the level of development in a given country. Declining shares in agriculture can be indicative of growing productivity in that sector, relative growth in industry is associated with a strengthening formal sector, and growth in the service sector has come to signal entry into a post-industrial state.

The percent employed by status (waged and salaried, self-employed) is also an indicator of the direction of development. Waged and salaried workers tend to enjoy the benefits of higher capital/labour ratios, and self-employment, particularly own-account self-employment is dominant in the informal sector.

There are two informal sector indicators in this sub-domain, one for urban areas and the other for the whole country. In the same way that the unemployment rate is not meaningful for some developing countries, informal sector indicators are not very relevant to the labour markets of highly industrialised countries. However, for many developing countries, being able to track the *relative* size of the informal sector is elemental to the measurement of progress in the quality of employment.

**Labour volume**

All of the indicators in this sub-domain address the fact that conventional labour market measures (e.g., ILO unemployment rate) are "head counts" with persons classified as employed regardless of how few or many hours they worked. In addition, they are based on short intervals of time (frequently a reference week). Measure of economic well being, on the other hand, generally use a reference year. Mean annual hours worked provide a measure of the volume of work over a period long enough to give a meaningful indication of the potential for employment to provide adequate earnings, hence individual and family incomes.

The indicators on part-time employment, and, short and long hours, all serve to describe the variations in the volume of work, variations that are obscured by simple employed-persons counts. Jobs with very short hours simply cannot provide substantial earnings.

None of these indicators is in Tier 1 largely on grounds of availability in many countries.

**Cost of labour**

These indicators are all oriented to economic side of labour statistics since they address compensation as a cost of production rather than as the major source of income for workers and their families. Their policy relevance lies in the information they contain about an important determinant of a country's international competitiveness.

As in sub-domain 4, limited international availability precludes including any of them in Tier 1.

**Gender equity**

The achievement of gender equity is a pervasive policy goal of many governments and increasingly governments are monitoring the gender equity impact of policy initiatives that serve other goals.

Many of the indicators listed in other sub-domains could also be used as gender equity indicators if they can be disaggregated by gender.

**Labour output**

Labour productivity is generally seen as the ultimate means of increasing the economic well being of a country's population. These two indicators are on the economic side of labour statistics, and they are more likely to be produced as a part of a country's system of national accounts than as part of its labour statistics program.

**Child labour**

This is another indicator that is not especially relevant to the labour markets of many industrialised countries, but which is crucial to the development of social policy in many countries in the developing world. While there are many reasons to attempt to minimise child labour, from a labour market perspective, it is the negative relationship between child labour and schooling that is the principle concern. The future job prospects of those who do not finish their primary education are often dismal. And the drag on the country's future labour productivity growth when high skill jobs become available cannot be overlooked.


**4.      General Issues**

The fundamental dimensions of labour market statistics

Labour market statistics are ultimately about employment. Whether they relate to the properties of jobs and those who have jobs, or whether they relate to those who do not have a job and want to get one.

Labour market statistics are just that, market statistics. They therefore have a supply dimension and a demand dimension. In many instances, e.g., estimates of employment levels, labour market statistics represent the intersection of supply and demand. The full measure of demand is employment plus vacancies and the full measure of supply is employment and unemployment.

Statistics on jobs (the demand dimension) can be distinguished from statistics about the people holding or seeking those jobs (the supply dimension).

Units of measurement

On the supply side, labour market statistics generally use the person as the unit of measurement, i.e., the number of employed persons, the number of unemployed persons, average hours worked per person, etc.

On the demand side, the most widely used unit of measurement is the job. (The self-employed can be viewed as individuals who have created their own jobs.)

The supply side intersects with the demand side in employment. In other words, employment can be viewed as either the number of occupied jobs or as the number of persons with jobs.[1] Excess demand is measured in vacant *jobs*, excess supply is measured as unemployed *persons.*

But the needs of consumers of labour market statistics cannot be met simply by counting the number of undifferentiated persons in a given situation or the number of undifferentiated jobs, be they occupied or vacant. The applications of labour market statistics require that specific characteristics of the persons be recorded (e.g., age, gender, educational attainment) along with specific characteristics of the jobs (e.g., industry, occupation, rates of pay).

Labour market statistics have some fundamental dimensions that can be observed in one or more of the indicators given to the group to consider.

> *Volume:*
> Jobs vary in terms of the volume of work that they provide, whether the volume is measured over a short period of time (e.g., a week), or over a longer period of time (e.g., a year). Similarly, persons can vary the volume of work that they do. This varies not only by the jobs that they hold but also by the amount of time that they choose to spend in the labour force over a period of time such as a year.

> *Price:*
> Jobs provide compensation. From the demand perspective, compensation represents the cost of labour to the employer, or the cost of labour to the customer in the case of the self-employed. From the supply perspective, labour compensation is income, the principal means by which the workers and their families generate the capacity to consume the goods and services that determine their economic well being.

> *Quality:*
> Jobs can be described not only by the volume of work they provide, and the earnings that they yield, by also by a host of qualifiers that address dimensions in addition to volume and price. These include industry and occupation, as well as duration (security), working conditions, travel-to-work effort, and so forth.

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[1] This is not strictly true at a point in time since an individual can hold more than one job (including self-employment) at a point in time. The disparity between the count of occupied jobs and the number of persons with jobs can be larger when the reference period is longer, say, a year.

Persons occupying, or seeking, jobs can be described according to a host of dimensions, often referred to collectively as human capital. These include experience, skills and educational attainment. They can also be described by a number of qualities of relevance to government policies such as age, gender, and immigrant status, to name a few.

## National/international conflicts

As noted in the discussion of at least three of the indicators (e.g., those based on the ILO unemployment rate, the informal sector and child labour) the level of national relevance varies across countries according to their place in the spectrum of stages of development and industrialisation. Had absolute priority been given to complete international comparability across countries at all stages of development, these indicators would, at best, have been assigned to Tier 3. However, these indicators are of very substantial national policy relevance in large *groups* of countries, and international comparisons for domestic policy purposes are likely to be to countries *within the same group*.

See below for an issue with international comparability implications.

## Coverage of sub-domains

As noted previously, labour market statistics are based on a logical conceptual structure. While measures of total supply (employment, plus unemployment plus underemployment) were included in the set of indicators the group had for its consideration, in order to have measures of total demand, it would have been necessary to have an indicator relating to job vacancies. Such an indicator was not included.

The group feels that some indicator of excess labour demand (analogous to measures of excess labour supply) would be an appropriate extension of the labour market indicator set.

## Sub-domain specific issues

In both the labour supply and the labour utilisation sub-domains, it should be noted that the interpretation of the indicators is not necessarily consistent across countries in all stages of development. For example, for reasons noted in the text for Sub-domain 2., a country with rising average family income and an expanding social safety net (especially one with unemployment insurance) it is possible for the measured unemployment rate to rise, or fail to decline, when labour market conditions are improving.

Similarly, in a country with a substantial informal sector, and a statistical system that effectively covers employment in the informal sector, the employment to population ratio can decline as economic conditions improve. This derives from the fact that with increasing real incomes, not all family members will be driven into the labour market to meet the most basic of family needs.

**6.** **Next Steps / Future Considerations**

The general recommendations of the Friend of the chair report are applicable to the performance of future work in the domain of labour market statistics.

It should be noted that in the domain of labour market statistics, the International Labour Organization has for decades provided crucially important support to the development of internationally comparable  statistics through the resolutions of the International Conferences of Labour Statisticians (ICLS).  The effectiveness of future work in the domain of labour market indicators will be enhanced by making explicit and extensive use of the standards established by the ICLS.

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The work of the expert group was conducted entirely by e-mail.  Since many of the group's deliberations took place in July and August, a number of the members were on vacation for some part of the discussion.   This document therefore reflects the views of those in a position to comment on various portions according to their availability at the time that a given issue was "on the table."

# 2.6 Report of the Expert Group on Education Indicators

1.  Policy Goals

1.1. Education has figured prominently in the work of virtually every recent United Nations Conference and Summit.

1.2 At a general level this interest flows from the importance of education, and education policy, as instruments of public policy in multiple domains – social, economic, cultural, political and environmental.

1.3 At a more specific level, statistical indicators in the education domain are judged to be important for a variety of reasons enumerated below.

1.4 First, expenditures by government on education account for a significant proportion of total public expenditure. As a result citizens, governments and multilateral organisations have an interest in understanding the relative efficiency, effectiveness and equity of these investments.

1.5 Second, macro-economic growth theory and related evidence suggests that human capital plays a much more important role than thought in fostering economic growth than previously thought. Although not the only social institution responsible for learning, national education systems play a central role in developing human capital needed to achieve high rates of economic growth.

1.6 Third, at the micro level, education is thought to play a role in determining the efficacy of a range of social and economic institutions, including the family, firms, schools, neighbourhoods and municipalities.

1.7 Fourth, education systems play a central role in the production of social capital, providing citizens with the ability to join and function in heterogeneous groups, to act autonomously and to use tools, including language and literacy, interactively.

1.8 Finally, much inequity in social, environmental and economic outcomes experienced by adults, within and between countries, can be traced back to differences in access to and the quantity and quality of formal education systems.

1.9 Indicator systems play an important role in focussing public attention on issues of particular importance but are unsatisfactory instruments for informing either personal choice or public policy in the area of education. Viewed in this ways indicator systems are simply a means to an end. The real value of empirical evidence to public policy lies in the thoughtful analysis of bodies of evidence related to particular issues. Indicator systems also serve a secondary purpose – they provide a mechanism for achieving

conceptual and definitional clarity, for identifying measurement issues that interfere with comparison and priorities for data development.

1.10 The cross-cutting nature of education as a public policy issue and the view of indicator systems as a necessary but insufficient element in a coherent body of official statistics coloured the work of the expert group.

## 2. Organising Framework and Criteria for Selection of Education Indicators

2.1 The work of the expert group was informed and to a certain degree constrained by the organising frameworks adopted by UNESCO and the OECD in their indicator work in the domain of education.
In both cases, these frameworks reflect a systems approach to the function of the education system, one that identifies four elements:

> Social and economic context
> Educational inputs
> Educational processes, and,
> Educational outputs and outcomes

2.2 While a useful organising device such a framework is less helpful when thought of in a longitudinal perspective that focuses on individual life trajectories. In this case it is difficult to distinguish between inputs and outcomes, as outcomes at one age become inputs for the next. Understanding the full set of conditional probabilities that explain both relative and attributable risk allow one to understand the processes that underlie change observed in the output/outcome indicators.

2.3 The following criteria guided and informed the work of the expert group:

- To reduce the overall number of indicators
- To identify a small number of high priority indicators
- To achieve a rough balance of indicators among inputs, processes and outcomes
- To include only robust indicators i.e. those with good measurement properties
- To reduce, to the extent, possible, redundancy in the indicator set
- Where serious gaps in coverage were identified, new indicators were proposed

## 3. Description of Process Adopted

3.1 The initial list culled from UN Conference Follow-up Indicators included 34 education indicators.

3.2 The first task of the group was to classify the indicators using OECD's INES framework as a rough guide. Once classified it became clear that the majority of the proposed indicators reflect educational inputs rather than educational processes or

outputs/outcomes. In addition, all of the proposed output/outcome measures relied on proxies of actual achievement, rather than direct measures. The primary challenges for the group were, therefore, to strike a more balanced reflection of educational inputs, processes and output/outcomes and to recommend more reliable outcome measures in the literacy domain.

3.3 Rankings and comments were solicited from the expert groups by email and their input was used to arrive at an initial prioritisation. This process identified 13 indicators as Tier 1 high priority, 10 as Tier 2 medium priority and 11 as Tier 3 priority. The results of this initial triage and ranking are attached as annex 1.

3.4 Discussion with the Chair of the Advisory Group resulted in a re-balancing of the proposed classification to bring the education indicator set in line with other domains. This process involved relegating some indicators to the "other" category, removing a few "new" indicators and further reducing redundancy in the proposed set through elimination, resulting in the following indicator set:

HIGHEST PRIORITY

1. Public current expenditure on primary education a) as a percentage of GNP; and
 b) per pupil, as a percentage of GNP per cap
2. Pupil-teacher ratio.
3. Net enrolment ratio in primary (or basic) education
4. Net secondary enrolment ratio
5. Secondary or Primary School Completion Ratio
6. Adult literacy, male and female, by age

HIGH PRIORITY

7. Percentage of primary school teachers having the required academic qualifications.

8. Average number of years of schooling completed, by urban/rural, sex and, where possible, by income classes

9. Percentage of pupils having reached at least grade 4 of primary schooling who master a set of nationally defined basic learning

DESIRABLE

10.     Percentage of primary school teachers who are certified to teach according to national standards
11.     Net intake rate: new entrants to primary grade 1 who are of the official primary school-entrance age as a percentage of the corresponding population
12.     Apparent (gross) intake rate: new entrants in primary grade 1 as a percentage of the population of official entry age.

13. Percent [of pupils starting grade 1] reaching grade 5[/completion of grade 4] of primary education [Survival rate to grade 5 (percent)]
14. Learning achievement –literacy, mathematics, science)


OTHER

Total public expenditure on education
Public expenditure on primary education as a percentage of total public expenditure on education
Proportion of public vs. private (if any)
Support through subsidies (if any)
Teacher salaries in primary and secondary
Teaching time and work time
Proportion entering school
Ratio of boys in primary and secondary education combine
Net primary school attendance rate
Coefficient of efficiency (ideal number of pupil years needed for a cohort to complete the primary cycle, expressed as a percent
Repetition rates by grade.
Ratio of girls to boys in secondary education
(Not deemed necessary if enrollment and/or completion is given by gender, socioeconomic status, ethnic status…)
Ratio of Literate Females to Males (15 to 24 Year-Olds)
Literacy Gender Parity Index: ratio of female to male literacy rates.
Earnings by educational attainment
Labour force participation by education attainment
Gross enrolment in early childhood development programmes, including public, private, and community programmes, express
Percentage of new entrants to primary grade 1 who have attended some form of organized early childhood development programme
Preschool development

3.5 The final prioritised set were subjected to a final review by the full Friends of the Chair Advisory Group on October 15-17, 2001 and the resultant prioritised list displayed in Table 1 of the document "An Assessment of the Statistical Indicators Derived from United Nations Summit Meetings", prepared by Friends of the Chair of the United Nations Statistical Commission for the 2002 UNSC Meeting, November, 2001.


## 4. General Issues

4.1 The expert group identified a number of general issues in the course of their deliberations.

4.2 The first, and most important issue had to do with the healthy scepticism the group had about the utility of concentrating such effort on the selection of a limited set of indicators. Our collective judgement is that focussing on indicators detracts from more fundamental issues related to the development of national statistical infrastructure, including the development and analysis of the primary statistical data sets in a comparative framework.

4.3 The group also felt the its work was impaired by the absence of any explicit theoretic or conceptual framework flowing out of the work of the UN Summits. While basic elements of such a framework can be inferred from the Summit and Conference documentation, it is not clear that the resultant framework lines up with the OECD framework adopted by the group.


## 5. Coverage of sub-domains

5.1 The group identified a number of issues related to coverage of sub-domains in the classification framework.

5.2 First, it noted the complete absence of measures related to the learning of adults, including measures of participation in formal adult education and training. This is judged to be a major gap given UNESCO's focus on Education For All and certain of the Millenium Goals.

5.3 Second, it expressed concern for the imbalance in coverage, particularly the absence of any elements related to school processes and structures.

5.4 Thirdly, it regrets the focus of the indicator set on the initial cycle of formal education, a focus that ignores the fact that significant learning occurs in other social institutions, including the family and the workplace.

5.5 Finally, it expressed grave concerns about the total reliance in in-direct measures of educational outcome, most particularly in the area of literacy.


## 6. Next steps/future considerations

6.1 The group recommends that the UNSC:

- establish a process involving educational statistics experts from international agencies and member states to investigate the feasibility of adapting skill assessment methods employed in the economically developed world for use in developing nations.
- Establish a process to consider the addition of indicators related to learning in other contexts and ages, most particularly in adulthood.

- Undertake a detailed review of the ability of countries to report the recommended indicator set on a regular basis and the quality and comparability of the resultant estimates given the nature of the underlying statistical systems.

Annex 1

## UN Education Indicators: Sub-Domains and Rankings*

*     Red = Highest priority=1
        Blue= High priority=2
        Black= Desirable=3

**Input Measures of Education**
Financial Resources Invested
1.Public current expenditure on primary education a) as a percentage of GNP; and b) per pupil, as a percentage of GNP per cap
1.Public expenditure on primary education as a percentage of total public expenditure on education.
3.Additional Desirable indicators:
3.Total public expenditure on education
3.Proportion of public vs. private (if any)
3.Support through subsidies (if any)
Teachers (Learning Environment)
1.Pupil-teacher ratio.
2.Percentage of primary school teachers having the required academic qualifications.
3.Percentage of primary school teachers who are certified to teach according to national standards.
3.Additional Desirable indicators:
3.Teacher salaries in primary and secondary
3.Teaching time and work time
Participation
1.Net enrolment ratio in primary (or basic) education
1.Net secondary enrolment ratio
1.Gross enrolment ratio in primary (or basic) education
1.Gross secondary enrolment ratio, male and female
2.Net intake rate: new entrants to primary grade 1 who are of the official primary school-entrance age as a percentage of the corresponding population
2.Apparent (gross) intake rate: new entrants in primary grade 1 as a percentage of the population of official entry age.
2.Gross school enrolment ratio: female and male (Primary and Secondary)
3.Proportion entering school
3.Ratio of boys in primary and secondary education combined
3.Net primary [school] enrolment ratio (REDUNDANT?)
3.Additional Desirable indicators:
3.Participation in adult programs

**Output Measures of Education**

Completion

1.Secondary or Primary School Completion Ratio

1.Percent [of pupils starting grade 1] reaching grade 5[/completion of grade 4] of primary education [Survival rate to grade 5 (percent)]

2.Average number of years of schooling completed, by urban/rural, sex and, where possible, by income classes

Achievement

2.Percentage of pupils having reached at least grade 4 of primary schooling who master a set of nationally defined basic learning

3.Learning achievement (optional)

Efficiency

1.Net primary school attendance rate

2.Coefficient of efficiency (ideal number of pupil years needed for a cohort to complete the primary cycle, expressed as a percent

2.Repetition rates by grade.

Equality (Access to Education)

3.Ratio of girls to boys in secondary education

(Not deemed necessary if enrollment and/or completion is given by gender, socioeconomic status, ethnic status…)

**Outcome Measures of Education**

Literacy skill

1.Adult illiteracy, male and female

1.Female illiteracy rate

1.Literacy rate of 15-24 year olds

3.Ratio of Literate Females to Males (15 to 24 Year-Olds)

3.Literacy Gender Parity Index: ratio of female to male literacy rates.

Economic outcome

3.Additional Desirable indicators:

3.Earnings by educational attainment

3.Labour force participation by education attainment

**Early Childhood Development**

2.Gross enrolment in early childhood development programmes, including public, private, and community programmes, express

2.Percentage of new entrants to primary grade 1 who have attended some form of organized early childhood development programme

3.Preschool development

Annex 2: Members of the Expert Group

T. Scott Murray Statistics     Canada (Chair)
Mariann Lemke                  USA
Laura Lippman                  USA

| | |
|---|---|
| Norberto Bottani | Switzerland |
| Scott Matheson | Australia |
| Vivien Heyl | Chile |
| Joao Baptista Gomes de Neto | Brasil |
| Dominic Leung | Hong Kong |
| Bourdenkova | Russia |
| Try Sothearith | Cambodia |
| Liu Wei | China |
| Albert Tuijnman | Sweden |

# 2.7 Report of Expert Group on Other Social Indicators

## 1.      Policy Goals

This report concerns the indications coming from the Experts Group on "Other social" about the sub-domains, definition and priority of the indicators. The "Other Social" is a Domain that presents some peculiarities.  It comprises the social policy issues not allocated to other Domains and the original list of indicators considers rather heterogeneous topics. Although it includes indicators that are residual respect to the other Domains, the related policy concerns and specific goals are not less relevant than the other areas, and can involve more than one Conference and Summit. UN has provided a listing of policy concerns and goals associated with the various indicators, and even if they have been reported in a generic way, we can individuate four large policy concerns that UN could enrich further if it is believed opportune.

Specific policy concerns regarding "crime and justice" emerge by the United Nations Conference of Human Settlements and by the Fourth World Conference on Women. Violence affects the quality of life of women and men who experience, witness, or feel threatened by it. "To gain in crime prevention", "to reduce violence and crime" are basic policy goals for all societies in every time.

Not less important policy concerns are those related to the "women empowerment and gender equality". Promote gender equality and women empowerment is strictly related to equitable access to political institutions and to the labour market. The Convention on the Elimination of All Forms of Discrimination against Women and the Beijing Declaration emphasise the importance of equal participation of women with men in public and economic life. The need to measure female-male gaps in major socio-economic issues was underlined also by United Nation Conference on Human Settlements.

 The Conference of Environment and Development and the Conference on Human Settlements have stressed that inadequate, crowded or costly housing can pose serious problems to people's physical and psychological or material well being. Provision of sufficient livings space, avoidance of overcrowding and severe cost burden, quality and reliability of local service are basic requisites in order to assure healthy and safe environment of life.

The UN Conference of Environment and Development gave particular emphasis to the communication and to the access to Information Technology. In fact, profound changes are occurring worldwide in the communications and information industries. Increasingly, these changes are affecting people's use of communication tools and information content. To reduce disparities among people and countries in access to information technologies is a new challenge for the next future.

 Clear and well-defined policy concerns, specific goals and targets are fundamental parameters in order to define adequate indicators, to understand the relevance and the

limits of the indicators in relation to the different goals. For this reason, we underline that for the future a basic preliminary work of any Conference and Summit should be of avoiding too much generic concerns and indications. The difficulties to individuate precisely the features of the policy concerns and goals, inevitably, lead to a proliferation of redundant or inconsistent indicators and prevent of orienting the national abilities of producing indicators relevant for political decisions.


## 2.        Processes for Selecting Indicators

The "Other social" expert group has faced an arduous task because both the list of indicators and related topics were very heterogeneous. UN has supplied an original list of 29 indicators and, in progress of the work, has deleted some indicators (e.g.: pre-school development and adult illiteracy are in Education group of indicators) and has added some others (e.g.: new indicators related to the use of illicit drugs). The expert group individuated some sub-domains (at moment they are four), that for their relevance - differently from the majority of the sub-domains of other Domain - could be considered even as Domain. From the beginning and after having defined the sub-domains, the experts group worked on the indicators ranking them within every sub-domain. However, after some starting considerations it was clear that, first of all, the analysis of every indicator was necessary. The priority hierarchy could not be defined *a priori,* but only after having examined their nature and the specific problems related to each of them. Furthermore, there was a need to clarify the meaning and definition of every indicator particularly because some of the so-called indicators in the list were not "not real indicators" but, while important, specification for arrays of data often of a very complex nature. Many of the topics do not have a solid framework of international statistical standards and guidelines as other areas. For many aspects, the range of indicators derived from UN summits and major conferences in this Domain appears to be deficient. Hence the Expert Group has analysed some additional indicators in order to fill the biggest gap, and has preferred to eliminate a relevant part of those proposed because they did not satisfy the basic requisites for the selection.

In fact, in order to have a good balance within each sub-domain (a good proportion of "first" and "second" priority indicators) and between different sub-domains (a good representation of all sub-domains), the goals of our work was to have good balance between policy relevance, statistical robustness/reliability and comparability at international level. The "Other social" indicators of UN Conference and Summit do not always permit to make this synthesis adequately. Some indicators did not satisfy statistical quality criteria, some others presented many problems regarding current availability or feasibility. This has influenced number and relevance of chosen indicators and has led the discussion in New York meeting towards a further strong reduction of the indicators until to sacrifice some relevant topic and sub-domain.

From a methodological point of view, in the process of selection of indicators, we took into account some necessary criteria:

- statistical robustness and reliability
- the availability of data at international level and the real possibility to produce harmonised indicators
- the involvement for policies
- the need to cover as well as possible every sub-domain;
- the need to monitor phenomena and the opportunity to know their trends;

The experts expressed, afterwards, their technical observations and suggestions about all indicators listed. The priority in the experts' work has been to give a good hierarchy to the existing indicators (without the inclusion of a big number of new indicators), as suggested in the "Terms of reference" we received at the initial step of the work. The first draft of the framework and the first indicators hierarchy was submitted again to the attention of experts.


## 3.      Sub-domain Structure

The subdivision of domain was made taking in account the main political goals and the key policy area for the indicators. Following the policy concerns described in the first paragraph, we defined four sub-domains.

**Crime and justice** is a very strategic area for national and international policies. Instead of the lacking in this area of ability to produce consistent, reliable statistical information on an ongoing basis, this sub-domain includes 4 indicators, but none at the first level of priority. At the second level it include the homicide rate, at third level it places the crime rates, the number of persons in prison and the prevalence rates of illicit drug use (or) illicit drug related death rate.

**Women empowerment** and gender equality domain includes 2 indicators on participation of women in national government (% of seats in national government, including parliament held by women, at first level) and the ratio male/female decision makers at city level (at third level)

**Housing domain** includes 5 indicators concerning households with electricity (first level), number of people for room (at second level), area of urban settlement, households with piped water and tenure type (at third level).

**Access to Information Technology** domain includes 3 indicators: main telephone lines (at first level), Internet subscribers and number of PCs (at second level) per 1000 population.

Actually, a fifth sub-domain was defined at the beginning of expert group's work that included "children's living arrangements" indicators. Nevertheless, indicators on the social and housing conditions in which children are raised appear to be deficient and not very harmonized at international level. The "Other social" group has tried to consider new indicators but these do not have a good framework of international statistical

standards and guidelines as other areas. For this reason, the New York meeting did not agree on the topic and this sub-domain has failed. This has left an informative hole, a problem to be solved quickly in the next future.

Finally, we would like to underline a cross-domain/indicators issue: the gender approach. Statistics can - and must - play an important role in accomplishing the goal of "…equality, development and peace for all women everywhere in the interests of all humanity" (Beijing Declaration, 1995). In this sense, it is fundamental to have information for male and female. In particular, it is important to underline that for each indicators, we should take in account of two different measures: i) the proportion between male and female regarding a specific phenomena and ii) the specific ratio for male and for female separately (e.g. the women involved in the phenomena as percentage of women population and the same for men). When household data are collected it could be useful to refer indicators to "reference person in household" (and not to woman or man-headed households). We believe that this approach should be generalized to all domain and sub-domain.

## 4.      General Issues

Not very few problems remain unsolved also for the indicators that the expert group chosen at various level of priority. These problems have strictly related, for some countries, to the weakness of the national abilities of producing reliable statistics, but also to the lacking of a strong harmonization process in the different areas.  Both these points have to be stressed. Data quality and comparability represents, beyond any other aspects, the main requirement for setting up a system of indicators useful for the purposes of policy follow-up.

Concerning the sub-domain "Crime and Justice", the indicators proposed by the UN Conference could be interesting, but they are not really comparable at the international level. Crime laws and concepts of crime are different in each country, so it is difficult to compare the generic "crime rates".  Furthermore, in order to evaluate the level of crime and to compare the situation of different countries is not possible to consider only the frequency of crime, but it should include the analysis of the burden of different kind of offences on the whole. Nevertheless, the indicators can under-estimate the real level of crimes because many crimes are not reported to police services. A country crime rate may simply reflect the level to which crimes are reported to police or levels of policing activity. Dark figures for some crimes can be collected only by Victimization Surveys, but they still have a very low level of spread around the world.

For this reason one indicator was added and put at a level of priority higher than the crime rate, even if not at the first. It is more limited from a conceptual point of view, but stronger in terms of comparability. The "death for homicide and injury purposely inflicted by other persons" can be a simple and strong indicator at international level. It has been used in two different ways: with or without the "intentional" specification. From a conceptual point of view only the "intentional" homicide rate can be better, but

from an operative point of view the definitions can differ from one country to another. The definition coming from the relevant International Classification of Diseases category (ICD-9) based on causes of death statistics should use. This indicator is comparable at international level and does not suffer problems related to dark figures.

Some problems also affect other indicator of this domain: the number of persons in prison per 1000 population and the prevalence of illicit drug use. For the first, a distinction is required on type of institutions because, in some countries, some institutions for young people are not considered to be "prison". For the second it necessary to mark that drug abuse definition varies in different countries and drug abuse can include overuse of legal drugs (e.g. alcohol etc.). Some drugs are more harmful/socially unacceptable than others are. So it would be desirable to have the indicator breakdown for different types of drugs (e.g. cannabis, cocaine, heroin, etc). Statistical registers can under-report the phenomenon.

A sub-domain that still appears to satisfy not completely the policy goals is "Women empowerment and gender equality". In fact, the concept of empowerment concerns not only the equitable access to political institutions, but also an equal participation of women with men in economic life. The percentage of seats in national government, including parliament, held by women is a powerful indicator to measure the first dimension of empowerment, but this sub-domain does not include indicators related to making decisions at economic level. The "Other social" group proposed two new indicators that point out the women status in the labor market: the percentage of female administrators/managers and the percentage of female professionals or technicians. During the discussion with the international organisms it was decided to eliminate them. The need to make some indicator focus on the role played by women at economic level stays a relevant problem to be solved in the next future.

Finally, concerning the ratio male/female decision-makers at city level we have to consider that the definition of 'city councils/governing bodies' can be problematic. Due to the large number of municipalities in many countries, the data gathering could take a lot of time and effort.

The "access to Information Technology" sub-domain has a little number of indicators because of the scarce quality and availability of data. At the beginning of our work, a number of indicators concerning mobility and transport were included in this list. They regard a sub-domain certainly important, but very few sources of data were identified. The related indicators still need to be improved from a statistical point of view, and so they have been eliminated.

For the PC and Internet the chosen indicators do not give information about the level of penetration of new technologies by gender and generation, and also the telephone has similar problems.

Number of subscribers per 1000 population can be obtained from Internet Service Providers (ISP), but actually the habit to have more than one personal account in order to

access Internet service is widely spread. In this way, a double counting problem is clearly evident, with correlated over-estimation of data. On the other hand, to have an Internet subscription does not imply a personal use of it. Data on Internet subscribers does not necessarily give the gender and the age of the subscriber". Analogous problems influence the indicator "number of PCs per 1,000 population". These indicators are rather far from that one proposed by "Other social" group "number of PCs users per 1,000 population". This indicator could permit to consider the actual access to the new technologies for the different social subjects, but the scarcity of sources for the required data impeded to insert it between the chosen indicators.

Also the indicator "main telephone lines per 1.000 population" present similar problems. At international level it still allows interesting comparisons between developing and developed countries. Even if it is interesting to have more refined breakdown of indicator (business / residential, urban / rural), a synthetic measure like this is a useful basic starting point to have information on telecommunication development. In a short time, the growth of telephonic company's number in many countries will generate new problems for data collecting. Undoubtedly, other indicators (as mobile phone diffusion) are strongly related to it and are essential in order to define the telecommunication development in every country, but at the moment the availability of needed data seems more limited.

## 5. Next Steps / Future Considerations

Undeniably, all the sub-domains included in "Other social" involved very important aspects of people life that cannot be treated as residual. For the future work, we believe that to these sub-domains should be given the dignity of Domain. The experts group feeling is that on the sub-domains that put together "Other social" was a general growth of interest, even if many of the related indicators had not been built in many countries. As also the incompleteness of the UNSD technical sheets showed, there is a lack of a shared conceptual framework and the level of harmonization is low. Hence a number of the proposed indicators need further conceptual and statistical development.

In many cases ideal indicators and actual indicators can coincide. In other cases the gap between the two kinds of indicators can be more or less wide and can be narrowed through small- or large-scale investments oriented to the development of adequate forms of statistical production. Moreover, the data source which turns out to be the most suitable to collect information for the real indicator compilation is not always so suitable for the ideal indicator.

The sub-domains that are limited from the longer distance between ideal and actual indicator are "Children's well-being", "Access to Information Technology", but, for some aspects, also "Women empowerment and gender equality". There are no good indicators focussed on the children well being concerning the living arrangements and housing conditions. Except for few countries, there are no reliable statistics on PC's users by gender and generation. For women, the indicators focus on political participation, but

they neglet participation in professional and senior administrative levels of the labour force. Obviously, this does not mean that these sub-domains are less relevant than other areas in order to measure the people quality life.

Some reasons of these difficulties arise from the relative youth of these topics. Women and children have been invisible in statistics until a recent past. The new technologies are progressing more rapidly than the awareness of the importance of the statistical information about them, and, for many countries, the economic burden to collect data from sample surveys often represents a heavy limitation. This makes urgent to plan a serious work in order to develop a set of indicators - shared at international level - on these topics.

The expert group's work is the right occasion to stress the need of identifying reliable and feasible indicators for monitoring the progresses achieved in these fields. The relevance of this topics and the lack of a shared conceptual framework about them impose, at the highest level of priority, to establish an international working group to progress in this indicators' area.

The rationalisation of the various groups of conference indicators, so as the strengthening of the national abilities of producing indicators relevant for political decisions cannot be faced ignoring the scopes of developing and refining the indicators as tool of evaluation of the progress of the conference objectives.

Therefore, the gathered information must allow to highlight not only the limits of the indicators, but also to evaluate the possibilities of orienting, in the short-medium period, the national abilities towards the implementation of statistical systems capable of producing reliable indicator. For example, in the Peking Conference a large session was devoted to the reflection on how countries have to prepare themselves to build up systems of gender statistics. Just as it happened on that occasion, the aim of strengthening the Member States' capacity to build up indicators relevant for policy-makers can also be pursued by working out plans for the development of adequate forms of statistical production.

For the Friend of the chairs' future work could be important to combine additional evaluation on the statistical information gap between the different groups of countries, times and costs of implementation of a system able to produce the indicators, number of countries capable of facing the investment in this direction. This could be very useful for the definition of a mechanism of revision of the statistical indicators, but mainly it could allow of orienting the requests of the conferences in a more efficient and effective way.

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