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Social Statistics for Human Development Reports *and* Millennium Development Goal Reports*: Challenges and Constraints***

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Abstract The preparation of over 564 *Human Development Reports* (HDRs) at various levels and, more recently, over 100 *Millennium Development Goal Reports* (MDGRs) have placed enormous demands on the national statistical systems across countries. While the evolving of newer indices designed to capture more qualitative dimensions of living pose one set of challenges, the need to compile data on much more specific indicators that are monitored over a long period of time in the MDGRs poses another set of challenges. Moreover, the spread of Right to Information and similar movements across countries has meant that, increasingly, questions are being raised about the ways in which information is collected and disseminated. The main objectives of the paper are to examine: the emerging statistical requirements for reporting on National HDRs and MDGRs, to examine their implications for generation and dissemination of data by National Statistical Systems, and to suggest alternatives to ensure that the 'process' that enables the National Statistical Systems to collate and disseminate data are in keeping with the principles of participation and transparency.

Key words: Social statistics, Statistical challenges, NHDRs, MDGRs

Introduction

Social statistics[1] have assumed considerable importance during the past decade as current debates have increasingly sought to grapple with the multidimensionality of development. The traditional role of statistics produced and financed by governments in order to serve the needs of efficient administration and management, as well as

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for effective policy-making,[2] has broadened considerably to strengthen and support a variety of stakeholders engaged in larger developmental efforts.

The preparation of over 564 *Human Development Reports* (HDRs) at various levels across the globe (Appendix 1) and the emergence of human development as an influential approach governing policy formulation has meant that social statistics are increasingly being used to determine baselines, set goals and targets, monitor progress and evaluate impacts. The adoption of the Millennium Declaration in 2000 by over 189 countries, which led to the emergence of eight Millennium Development Goals (MDGs) and 48 indicators to be achieved by the year 2015, gave a further impetus to this process (Appendix 2). More than 100 countries and five regions (Africa, Asia and the Pacific, Latin America and the Caribbean, Arab States, Central Europe and CIS) have published their *Millennium Development Goal Reports* (MDGRs) (Appendix 3). The purpose of MDGRs is to help countries raise public awareness, trigger debate around development challenges, forge stronger alliances, renew political commitment and help poor countries and donors create trusted partnerships that facilitate human development (United Nations Development Group, 2003). Each report attempts to track progress of countries towards the identified goals and targets, thus demanding concerted focus on data gathering, monitoring and analysis.

Furthermore, recent movements towards Right to Information in several countries have encouraged people at the grass roots demanding access to information that is often compiled from them but not made accessible to them, even though such data affect their lives in significant ways. This brings into question the traditional methods of treating individuals as 'respondents' and collating information from such dispersed 'sample units' for use at a distant location by 'national' and 'international' users. The philosophical and ethical questions that this raises for compilation and use of data need urgent attention.

In context of the aforementioned, this paper examines: the emerging statistical requirements for reporting on National HDRs (NHDRs) and MDGRs, their implications for generation and dissemination of data by National Statistical Systems (NSS), and suggests alternatives to ensure that the 'process' that enables the NSS to collate and disseminate data is in keeping with the principles of participation and transparency.

NHDRs and MDGRs — *similar yet distinct*

NHDRs and MDGRs share similar objectives but differ in their coverage of issues, format and method of preparation, and thereby in their requirement of data.

- NHDRs differ in their coverage of issues from country to country, and also from year to year within a country. Some of the major issues

addressed by NHDRs, aside from general human development issues, include governance, poverty, incomes and economic growth, gender, technology, peace and security, survival and health, environment and knowledge. The MDGRs, on the other hand, are designed to cover a uniform set of goals and targets over a period of time in each country.

- The NHDRs enjoy a high degree of flexibility in format and may handle issues more intensively, since they are largely independent reports and are not subject to specific comparisons with other reports. On the other hand, the structure for the MDGRs has been clearly indicated in the guidance note for their preparation. This requires the MDGRs to be ''short and sharp, concise and light, and will avoid wordy and complex text'' (United Nations Development Group, 2003, p. 7).
- The requirement of data for the MDGRs is much larger. The dimensions covered more in the MDGR than in any single HDR, and even for each dimension the indicators covered are sharper and much more specific.[3]
- The NHDRs focus on a few *outcome* indicators concerning education, health and standard of living, empowerment and political participation in their indices, whereas the MDGRs cover a range of output, outcome and impact indicators on eight dimensions. However, the special feature of the MDGR is the fact that it traces the progress of a particular indicator across different points of time with the baseline being 1990. In addition, each MDGR is expected to provide an assessment of the capacity of the country to monitor progress on MDGs (as weak, fair and strong) on the following parameters: data gathering, statistical tracking and analysis, translating statistics into policy, monitoring and evaluation, and quality of survey of information.
- The MDGRs are required to identify resource requirements for meeting the MDGs, a feature that the NHDRs may not necessarily address. Some of the MDGRs where this exercise has been attempted include Tanzania (2001), Cameroon (2002), Uganda (2003), Philippines (2003) and Malawi (2004).[4] Usually, these reports point out the specific areas that would require future financial and technical assistance.

Both NHDRs and MDGRs are neither completely similar to each other nor are they completely distinct from each other. In fact they are mutually supportive (Burd-Sharps and Jehan, 2002). They are qualitatively different reports but address similar issues, draw on similar data and are based on common principles of national ownership and widespread dissemination to a variety of stakeholders, including policy-makers, academics and civil society.

Data requirements

While the concept of human development has been broad in its sweep, emphasizing entitlements, choices and freedoms, the measurement of human development has had to confine itself to the more easily

quantifiable dimensions of income, education and health. In addition to the indices — Human Development Index (HDI), Human Poverty Index, Gender-related Development Index, Gender Empowerment Measure — that are reported annually in the HDRs, data on a variety of indicators are presented supporting specific themes addressed in each year's report. For example, the global HDR 1992 (United Nations Development Programme [UNDP], 1992) presented indicators and indices on freedom, the 1995 HDR (UNDP, 1995) reported on gender, and that of 2002 (UNDP, 2002a) listed subjective and objective indicators on governance. With such a variety of issues being covered under the HDRs, the demand for data on aspects such as environment, gender equality and governance has grown. To quote a few examples:

- The *South Asia Regional HDR 1999* (Mahbub ul Haq Human Development Centre, 1999) provided a new index, the Humane Governance Index, which included indicators such as budget deficit, inflation rate and public expenditure on education and health. For economic governance, the indicators used included corruption, quality of bureaucracy and accountability, whereas political governance was measured through freedom of expression, non-discrimination and political participation with rule of law representing civic governance. Obviously, data on many of these indicators would have been compiled for the first time.
- The *China HDR 2000* (Stockholm Environment Institute and UNDP, 2002) computed a Health Risk Index and rated the country's provinces according to the environmental health risk that the people were exposed to. Some of the indicators used at the provincial level were potential exposure to air pollution including indoor and outdoor pollution, potential exposure to polluted water, nutrition and capacity of health services. Many of these indicators did not have a ready database.
- The *Argentina HDR 2002* (UNDP, 2002b) developed the Enhanced Human Development Index, which, while following the original structure of the HDI, added new indicators to each dimension that were aimed at reflecting temporary variations as well as the 'quality' of basic HDI indicators. Some of the new indicators added were meant to contribute further information. For example, in the case of the dimension of knowledge, additional indicators added were evaluation of the quality of education in language and mathematics.
- The *South Africa HDR 2003* (UNDP, 2003a) designed the Service Deprivation Index, which measured the distribution of progress and the backlog of deprivation existing in several dimensions of basic services at the household level, such as housing, source of water, toilet, sanitation, electricity, heating and access to energy for cooking. It was based on the notion that human welfare is partly dependent upon access to 'decent' basic services of which a household is deprived.

The attempt, as is evident, both at the global and national levels, is to go beyond conventional measures and to reach out to concepts that are fundamental to the human development approach. It is this very feature that makes the HDRs valuable; however, it poses challenges for the NSS that are yet to adapt fully to meet the newer demands being made on them.

In the case of MDGRs, they are dependent to a large extent on the data produced in the NHDR. The specific human development-related data requirement of MDGRs further adds to the already existing demands on the NSS. Another issue that the MDGRs raise is one of indicators chosen for monitoring, as many of the selected indicators, while being adopted, are not yet widely accepted by participating countries. For example, the US$1 a day definition of poverty, as well as the definition and measurement of literacy, are subject to much debate.

What needs to be emphasized is that the issue of measurement is not one of the inevitable hiatus between concept and measurement. It is indeed a much larger issue — both in conceptual and empirical terms. Measurement would not be as critical if the HDRs and the MDGRs were mere academic exercises, and debates on their findings were confined to the intellectuals. However, the HDRs, by their very design, are visualized to be 'tools for action'. Over the years, the reports have highlighted critical human development issues, articulated people's perceptions and priorities, and have been actively used as tools for development planning.[5] Since human development is a people-centred concept, it is essential that data used in the HDRs should also be relevant from this point of view; that is, it should be demystified and made intelligible to the masses for whom the HDR is prepared and be readily accessible for use by people on whose lives the HDR has a profound impact. The NHDRs as well as the MDGRs are *advocacy* tools designed to raise awareness and generate debate on human development concerns.

Data sources

The increased emphasis on overall human development goals and targets rather than only economic well-being has increased the demands for data from the NSS. The NSS have diverse sources through which social statistics are compiled. Some of the more important sources are discussed in the following.

- The *Census* is considered one of the most reliable and comprehensive source of socio-economic status. However, in many developing countries, it is not carried out on a regular basis due to unfavourable social or political conditions.[6] Census data may be of limited use for monitoring the MDGs as they are generally conducted once in 10 years, whereas the MDGs need to be monitored annually. Moreover, there is considerable delay in processing of census data once it is collected.[7]

- *Sample Surveys* are the most frequently used sources of information for human development data, particularly as, compared with the census, they are relatively cost-effective. In many instances where data on a range of new indicators are not available, small surveys have been conducted to arrive at data on some of the indicators. However, the results of the survey depend heavily on the sampling techniques used, the size of the sample and the extent of bias on the part of those conducting the survey and the responses of those surveyed.[8]
- The *Civil Registration System* (CRS) provides vital information for the estimation of mortality rates and life expectancy that are crucial for understanding population dynamics at the local level and planning effective health and development programmes. If functioning efficiently, the CRS can be of immense help in generating human development data at the disaggregated level. It is a pity that CRS data in most of the developing countries suffer from inadequate coverage and under-reporting.[9]
- *Administrative Records* maintained by each of the administrative departments in the national governments are very useful for human development reporting. However, programmatic data collected by government functionaries have an in-built bias towards highlighting achievements and are considered unreliable by experts. What is even more disconcerting is that even as data on a variety of indicators are collected by the programme-implementing agencies, they are not accessible to the very people who are the main stakeholders in development planning. As discussed earlier, in view of the movement on Right to Information in several countries, it is important that the data are validated appropriately and disseminated in a user-friendly format to policy-makers as well as stakeholders.
- *International Data Sources* are often considered more authentic than the concerned national data sources, although international data are either derived from a national source or estimated on the basis of projection/extrapolation using data from countries with a similar profile. In recent times, efforts have been made to generate international data on a variety of indicators through the Poverty Reduction Strategy Papers, International Comparison Programme, Demographic and Health Surveys and Living Standard Measurement Surveys. These surveys have adopted standardized definitions across countries and have helped generate a largely comparable set of data on key indicators relating to poverty, demography and health. International data sources are easily accessible, but since the definitions and methodologies adopted for data collection are geared towards standardization, they tend to miss out on the specificities of particular situations in regions and countries. An important issue that arises is their relevance to the people. Whether it is accepted by national agencies as depicting people's true conditions and priorities is an aspect that needs to be considered while using them.

- *Data* produced by non-governmental organizations and the private sector can be very detailed and disaggregated as per the requirement of the concerned organization. Despite utility in specific contexts, their use for general planning and monitoring is limited, as they cannot be used for wider and more diverse sets of population. However, a systematic effort at developing appropriate data formats and insisting on reporting of a minimum set of indicators can contribute to the generation of microlevel data on a variety of indicators of interest to human development practitioners. Data produced by non-governmental organizations and the private sector could also be useful in instances where data are typical, although not representative, examples being data on AIDS and access to 'improved' water sources.

As observed earlier, there are a number of sources for reporting on human development goals and each source has its own advantages and limitations. No source is ideal or complete in itself, but complements and supplements the gaps existing in the others. Census exercises are massive and are costly to be conducted at frequent intervals. The time lag between census data can be filled up by scientifically designed sample surveys. There is a need for integration of data collected by different sources and methods. Moreover, greater efforts need to be made to disseminate the already existing data and to ensure their efficient use.

Statistical challenges

With the growing number of users of data that include policy-makers, media, international agencies, donors and academics, the NSS are burdened with demands for data on an ever-increasing range of issues. However, the enthusiasm to expand the range of indicators and indices has not been met with an equally forceful movement for capacity building of NSS, nor have the requisite resources, both financial and human, been devoted to the task.

The question is not merely one of an increase in the number of variables on which data are sought; it is also regarding the different and often not easily measurable aspects on which data are demanded. In fact, underlying the entire human development reporting exercise is the fundamental question of how effectively *quantitative* indicators capture dimensions of *quality of life*. In addition, newer demands are being made on the statistical system to measure aspects like social capital, safety, justice and crime. (United Nations Statistics Division, 2003). Also important to note is the fact that the *new indicators* may also require *newer methods* of data collection such as participatory assessments. Ironically, even as demand on the statistical systems has been multiplying manifold, there has been little prior consultation with the NSS, the main providers of data. Such consultation is vital even as decisions that are being taken on the type of indicators to be selected, or the periodicity at

which reporting would be done, are being determined, since it has repercussions on the statistical systems across countries.

A crucial purpose of the preparation of the HDRs, Poverty Reduction Strategy Papers and MDGRs is to sensitize policy-makers to human development issues. This requires ownership of the HDRs by a variety of stakeholders — governments, civil society and academics, to name a few. The issue of the data used is crucial here. The Global HDRs use global sets of data that are compiled from official statistics reported by various countries. These global data sets are often inadequate in bringing to the fore the types of issues that are more central to people's concerns. The very compilation of data is an issue that needs to be addressed more squarely. Who collects the data? What is the purpose for which such data are collected? Who gains access to such data? For people-centred development to have meaning, the data collected should be relevant to them and be accessible to them. However, the demands of reporting on uniform indicators at the national and international levels imply that there have to be standardized formats for reporting and compilation of data. The demands that these seemingly contrary requirements make is a challenge that has yet to be addressed, which is only a necessary step for it to be resolved. The question is whether the NSS are geared to transform the way in which they function in order to meet this challenge.

United Nations Department of Economic and Social Affairs (2002) and various Regional and National HDRs have highlighted a number of lacunae in the existing Statistical Systems, some of which are as follows.

Lack of requisite data from national sources

Despite considerable progress in terms of data availability on a number of indicators such as poverty and inequality (data available for one-third of countries covering 70% of the population), primary education (with three-quarters of countries having data) and environment (four-fifths of countries have data on carbon dioxide emissions), huge gaps are found in the coverage of human development data (Table 1) that present serious obstacles to the implementation and monitoring of poverty reduction policies.

Nguyen (2002) indicated that the NSS in Viet Nam could provide data only on 32 out of the 48 indicators on which data were required. The Global HDR 2002 (UNDP, 2002a) attempted to track achievements of countries on the MDG indicators, although the analysis was limited due to the non-availability of data for a large number of countries (Fig. 1).

It is quite disconcerting to note that as many as 116 countries had indicated that they did not have data on children reaching grade V, and 93 countries had no data on children in primary school enrolment. As has been commented upon by Loup *et al*. (2000), it is difficult to believe that there exist no data on enrolment in a large number of countries. What is more probable is that the process of data collection is ineffective, and

Table 1. Data gaps

Indicator (%)	Countries lacking trend data	Countries lacking any data
Children underweight for age	100	22
Net primary enrolment ratio	46	17
Children reaching grade V	96	46
Births attended by skilled health personnel	100	19
Female share of non-agricultural wage employment	51	41
HIV prevalence among pregnant women aged 15–24 in major urban areas	100	91
Population with sustainable access to an improved water source	62	18
Population living on less than US$1 a day	100	55

Note: Data refer to developing countries and countries in Central and Eastern Europe and the CIS. A country is defined as having trend data if at least two points are available — one in 1990–1995 and one in 1996–2001 — and the two points are at least three years apart.
Source: UNDP (2003b, p. 35).

countries may not be aware of the full range of data that are already being collected by various agencies. ''Statisticians carrying an in-depth effort to collect existing data in poor countries are frequently surprised by the 'discovery' of data whose existence is hardly known'' (Loup *et al.*, 2000, p. 12) Such a situation does not augur well for continued monitoring of indicators over a period of time.

Another major area of concern with respect to data gaps is gender-disaggregated data, a fact noted as early as 1990 in the first Global HDR.[10]

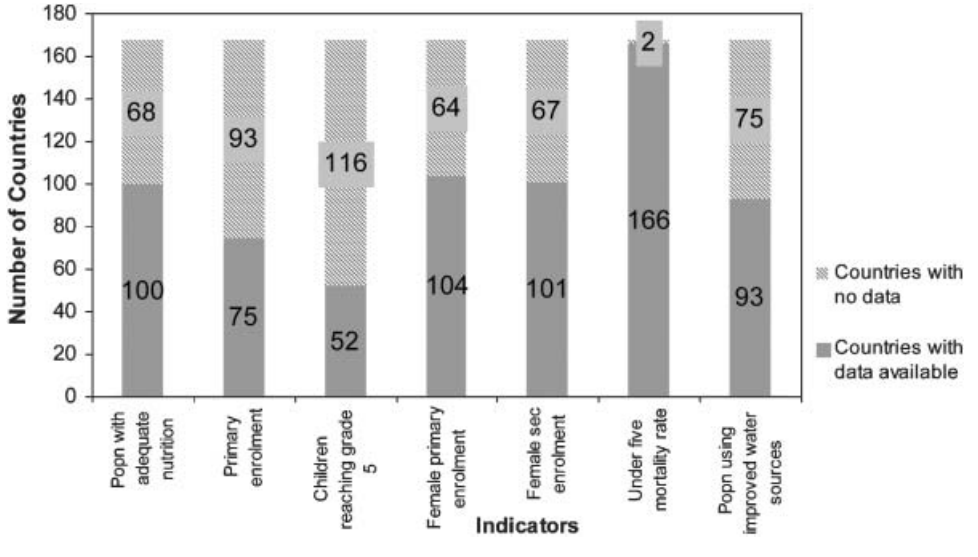

FIGURE 1. Data availability for select MDG indicators (out of 168 countries). *Source*: Derived from UNDP (2002a, p. 24).

By the introduction of the Gender-related Development Index and the Gender Empowerment Measure in 1995, the HDRs have highlighted the need for a gender perspective in development. But very few countries collect and present data by sex, which would reflect issues related to gender disparities in their region. The non-market economic activities of women are yet to be taken into account separately by the NSS.

In many instances, the constraint posed by non-availability of data are sought to be resolved by undertaking special surveys for collecting specific information. In the case of Indonesia, special surveys have been undertaken with limited sample size to obtain information of key human development indicators. These being generally subnational data, there has not been any serious attempt to build up a series of data for the region or to integrate national data into the global series. The absence of a systematic effort to build up a series of data on socio-economic indicators across countries even as several reports on human development and MDGs are being formulated implies that a unique opportunity to forge links across data systems of countries is being missed. Indeed, it is surprising that while there has been a consensus in definitions used and methodologies adopted to collect data on issues such as the Living Standards Measurement Survey and Demographic Health Statistics, similar efforts have not been undertaken to the extent required to address the needs of other human development indicators.

Inaccurate and unreliable data

Very often it is true that, more than the lack of data, it is the poor quality of available data that is an important issue. In developing countries, data inconsistencies are frequent and significant. Often the root of the problem lies in the data collection methods, which are different across different sources. It is also observed that definitions of terms vary from one source to another. A lack of coordination is observed among different ministries and departments, leading to inconsistent data at different administrative levels.[11]

An important shortcoming of official data, particularly for the human development sectors, is that they are often compiled through the administrative system, which is also responsible for implementing various programmes in these sectors. Self-interest lies in reporting optimistic estimates of 'achievements' when, in reality, the shortfall from stated goals may be quite high. For example, in India, gross enrolment ratios in schooling are particularly prone to this type of over-reporting, as a result of which the phenomenon of 'drop-outs' is also exaggerated. Wherever possible, systematic efforts to correct for such biases and cross-verification of official data with independently conducted field surveys and case studies must be an ongoing exercise if the NSS are to be credible and relied upon for providing much of the human development-related data.

Another problem that is likely to be faced in increasing measure in the future arises from the rising trend towards globalization, liberalization and

privatization. These processes make it difficult to monitor progress and attribute it to various inputs that were hitherto used for the purpose. For example, as the role of information technology and use of the Internet increases, education levels may improve even if the formal education infrastructure does not show an appreciable increase in numbers. Quantifying the impact of such inputs would be a challenge faced by statistical systems. A similar problem exists when the gaps created by inadequate civil registration systems are filled by estimates from surveys. Surveys, by their very nature, are liable to sampling and non-sampling errors. Also, when specific data such as cause of death data are required, the survey estimates are not very reliable. In the case of the Pacific region, the problem is acute on account of the small size of countries. The Pacific HDR for 1999 states categorically that ''In almost every country, the HDI data are neither reliable nor current'' (UNDP, 1999, p. 14).

Even where data are available, the accuracy and reliability of the data are questionable. Information on similar indicators collected by different agencies yields different data. The main reason behind this is the use of a variety of methods for collecting data and variations in definitions adopted for similar data elements. Often, it is also observed that the data for inter-censual years are obtained by interpolations, which are always liable to errors as the actual rate of growth of an indicator might vary from the assumed rate used. Extrapolation across census years in order to obtain estimates for specific years often creates several problems and the accurate interpretation of results in such cases becomes tricky.

An example that dramatically highlights the pitfalls associated with interpolations between inter-censual years is available from Fiji (UNDP, 1999, p. 15). The HDI ranking in the Global HDR placed Fiji 44th on the global scale, with a HDI value of 0.869, which meant that it was the only Pacific country to be included in the category of high human development. However, the HDI in the Pacific Regional HDR 1999, using more updated data, adjusted the index and placed the country at 102 in the scale, with a HDI value of 0.667. The discrepancy was partly due to the life expectancy figure, which was based for the 1998 Global HDR on an extrapolation from the 1986 census figure that assumed longevity would steadily improve. The Pacific HDR 1999, on the other hand, used data released from the 1996 census for the calculation of the HDI, which revealed that progress in life expectancy was much lower than assumed. More importantly, the estimates of per-capita GDP used in the two reports were markedly different. While the Global Report used an adjusted real per-capita GDP (US$6016), the Pacific HDR used GDP per capita (US$2684) — leading to a sharp fall in the relative position of the country on the HDI. A similar situation was reported for Samoa, whose ranking was 94 in the global HDR as compared with 118 in the Pacific HDR, Solomon Islands (123 in the Global HDR and 148 in the Pacific HDR) and Vanuatu (124 in the Global HDR and 140 in the Pacific HDR). While the two sets of ranks are not strictly comparable, being calculated for different years and with different

sets of data and methodologies, this poses a serious problem from the advocacy point of view.

Even the procedure of collecting information and the source which it is collected can make considerable difference to the quality of data obtained. For example, in case of Viet Nam, the poverty data from collected from the Ministry of Labour, Invalid and Social Affairs used in the Viet Nam HDR 2001 (UNDP, 2001)are not comparable between provinces as poverty is calculated based on both national poverty line and the localized poverty lines.

Often, the nature of data collection does not make adequate provision for reporting and recording errors that are most common when data on income are sought from households during a survey conducted at any given point in time. Apart from recall errors, the respondents may have a vested interest in under-reporting income, in the hope that lower levels of reported income would enable the household to gain access to some of the benefits that could be given by the government to households below the poverty line.

The NHDR and MDGR teams are expected to rely on national data systems. The NHDRs have relied on existing data from national surveys and administrative records in keeping with the principles of national ownership. However, in the case of MDGRs that are to be used for comparisons across countries, there is a need for uniform definitions. The problem is particularly acute in the case of data related to poverty as the levels of poverty reported on the basis of national poverty lines often vary considerably from that arrived at on the basis of international poverty line of US$1 a day. A crucial constraint is that even where data are reported using the national poverty line, due to frequent changes in methodology, data from one survey are not strictly comparable with earlier surveys. As a result of this changing methodology, it becomes difficult to construct a series of data on poverty-related indicators that are required for monitoring trends in the MDGR. For example, data on the share of women in wage employment in the non-agricultural sector (indicator 11) are available only for 69 countries. Reliable data on the proportion of pupils who start grade 1 and reach grade 5 (indicator 7) are limited to only about 40% of the countries. Even where the data are available, they are not consistently available for the same countries across time. (United Nations Department of Economic and Social Affairs, 2002). Under such circumstances, the reports tend to rely on international data for tracking progress.

Comparability of data over time and space

Even when data are collected, the *periodicity* of such collection is a problem. Census data available at decadal intervals can hardly serve the purpose of using the NHDR as a tool for measuring the change in human development indicators. The problem is acute in the case of MDGRs, which are essentially monitoring tools. In most South Asian countries, civil

registration systems rarely capture the extent of births, deaths and marriages, and hence the reliability of the available data is questionable. Routine data on schools, students enrolled, hospitals, medical and paramedical personnel are also not collected due to lack of emphasis on these data and the inadequate administrative back-up for compilation and analysis. The gaps already mentioned, however, do not necessarily imply a lack of effort on the part of the NSS. At times such gaps result more from ineffective dissemination of data than from the non-existence of data. Very often it is found that there are considerable variations in the qualitative aspects of data across time and space.

Monitoring of MDGs faces similar challenges since the indicators for the latest available year have to be compared with the 1990 values, because 1990 has been fixed as the benchmark year. In some countries data for 1990 are not available, while in some countries, even when available, comparison is difficult due to different concepts and methods used in data collection. This is often due to the keenness to refine definitions and include newer dimensions that become relevant over time.[12] Examples include indicators such as the proportion of births attended by skilled health personnel (indicator 17) and the proportion of population with sustainable access to an improved water source (indicator 29). These indicators suffer from definitional problems as each country might have its own definition of what constitutes '*skilled*' and '*improved*'. These problems have remained unresolved as attempts to standardize definitions have been confined largely to some of the health indicators that have been included in the Demographic Health Statistics and have not yet percolated to all dimensions of human development indicators. Although improvements in definitions need to be encouraged, it would be desirable to have simultaneous estimates according to previously used concepts to allow for comparison across time.

Comparability across countries also poses a challenge when the data are to be aggregated at the regional level (for the Regional HDRs) or global level owing to differences in definitions across geographical regions and economic groups.

Recognizing the need to establish standards and uniform concepts to allow comparisons among countries, the United Nations Statistical Commission in 1994 adopted the fundamental principles of official statistics. These consist of 10 Principles of Official Statistics (Appendix 4), which are set as a standard to be adopted by the NSS. These, however, are yet to be fully adopted by all the countries.

Lack of gender: disaggregated data

It has been increasingly recognized that national and international commitments require gender-disaggregated data across all spheres — economic, social and political. The underestimation of women's economic contribution through subsistence production, informal paid work,

domestic work and volunteer work at times leads to distorted policy decisions. At the same time, it is important to understand statistical systems in terms of gender; that is, to recognize the stereotypes and cultural biases, and take into account the needs of those using the data — policy-makers, planners and others.

Alternatives and suggestions

The foregoing analysis indicated the constraints faced by the NSS. However, in view of the importance of the task entrusted to them, it is imperative that actions be undertaken to strengthen and reorient these organizations to enable them to meet the emerging challenges. A few pertinent suggestions are listed in order to ensure that the NSS are well-equipped to meet the rising demand for a variety of indicators encompassing human development dimensions on a regular basis.

- There is an urgent need for greater *involvement of the NSS* in the preparation of NHDRs and MDGRs so that they understand the requirement for human development data and bridge the communication gap existing between producers and users of information. The situation where the list of indicators to be monitored is drawn up without much consultation with the NSS needs to be remedied urgently, and a strong partnership between the NSS, planning departments of governments, the United Nations system and civil society organizations is to be built and nurtured for development planning and monitoring to be meaningful. It has been observed often that even the existing data are not utilized adequately. Measures need to be taken to ensure that the *data collected* are *processed and disseminated* in a timely and cost-effective manner. The opportunities presented by the newer information technologies need to be explored and utilized to the fullest extent possible towards this end.
- *Decentralization of data collection* is an aspect to which insufficient attention has been paid hitherto. With the emergence of global data sets and the homogenization of developmental agendas, the specificities of individual regions and ethnic groups tend to get ignored. Data collection by local level agencies would help in bringing out the variations at regional levels, which are usually concealed by use of averages at the national and international levels. In the context of human development and MDGs, it is essential to recognize regional and cultural diversities and due attention needs to be paid to compile data on such characteristics so as to enable the formulation of context specific policies. In fact, decentralized data collection can act as a countervailing force to the emerging globalization of data.
- *A logical corollary to decentralization* is data on various developmental dimensions being collected with the full participation of people

for whom all development effort is undertaken. Instead of using a top-down approach towards information collection at the local level, it is important that people be involved in the process of both qualitative and quantitative data collection. For example, in an Indian province of Chhattisgarh, village-level reports known as People's Reports (*Jan Rapats*) have been prepared in 19 128 villages with the participation of villagers. These reports were further consolidated at the next administrative tier, the district, which in turn are used to prepare the State HDR. This was accomplished with the help of local level non-governmental organizations and facilitators who were trained to collect information. The process is, however, time-consuming since the relevant information has to be culled from a number of village and district reports, and when the consolidation is done at higher levels some information might get lost. Despite these problems, the participatory procedure provides authenticity to the report and results in sensitization of the people involved in the process. A similar approach was used in Papua New Guinea HDR 1998 (UNDP, 1998b) where the Participatory Rural Appraisal technique was used in 16 villages in seven provinces to identify key issues of concern to the people.

- A serious attempt has to be made to *standardize definitions and methodologies* on a minimum set of indicators selected for regular reporting and monitoring at the subnational, national and global levels. While some attempts have been made for specific dimensions of human development, a more systematic effort at covering the range of indicators included in the MDGRs is urgently called for.
- The need for *capacity building and training* is well recognized. While the demands on the NSS are increasing and they are expected to assume additional responsibilities with respect to regular monitoring of a variety of social indicators, many of which have hitherto not been quantitatively measured, inadequate attention has been paid to the training needs of their staff. It is essential for statistical staff to be trained at all levels at regular intervals to bring to their attention the emerging trends and also the rising expectations from them. Particular attention needs to be paid to gender sensitization as gender-disaggregated data continues to be a neglected area in the activities of most NSS (Prabhu, 2001).
- Systematic efforts at *coordination among different agencies* and *collaboration between the NSS and international agencies* to harmonize data and concepts need to be made on the lines of the Partnership in Statistics for Development in the 21st Century initiative, in existence since 1999. The main purpose of the initiative is to create partnerships between policy-makers, statisticians and users of statistical information at the national and international level. More recently, at the Second International Roundtable Conference on Managing for Development Results at Marrakech, Morocco in February 2004, representatives of the

multilateral development banks, the OECD Development Assistance Committee and United Nations programmes and agencies proposed an action plan for improving development statistics. The plan (popularly known as the Marrakech Action Plan for Statistics) has three objectives: to strengthen national capacity to produce, analyse and use reliable statistics; to improve the quality and availability of development statistics for global monitoring; and to support countries that are expanding their statistical capacity.[13]

- The need for *enhanced financial allocations* for capacity-building of the NSS is of paramount importance. National governments have traditionally not considered generation of statistics a high-priority area. Moreover, fiscal stringency in some countries during the 1990s could have reduced the resources available to statistical systems that possibly would have adversely affected the generation of human development statistics. In view of this, the necessary financial resources can only be allocated by a global coalition of national and international agencies. In fact, it is necessary that mechanisms to enable countries report on the MDGs be found expeditiously. To start with, a proportion of all development assistance must be allocated for the collection of data on a range of indicators used for monitoring human development progress and for capacity building of statistical systems. A small percentage, even 5%, of all development assistance flowing into a country may contribute to the rejuvenation of national statistical systems and provide the much required information to enable a systematic tracking of progress.
- In order to *fruitfully utilize the enhanced funds*, it would be essential for each country to carefully map the critical data gaps with a proposed action plan that outlines the measures to be taken to redress the situation. More importantly, since social statistics are typically scattered across several departments, efforts to synchronize such data are imperative as this would enable more effective monitoring and evaluation of the progress achieved in the areas of human development and poverty.

Concluding remarks

This brief overview highlights the emerging trends in national and global reporting on a variety of social indicators and the demands it places on the national and global statistical systems. Even as attempts are being made to adopt more holistic concepts of development, including that of human development, the efforts at monitoring progress across countries and within countries could be stymied by the lack of necessary statistical information. Since most of the efforts of selecting at indicators for monitoring are being done rather independently, without prior consultation with statistical systems, there is a real danger that progress on a very vital developmental agenda drawn up by countries could be constrained as

monitoring systems are inadequate. It is in the interest of all concerned that the generation of necessary data at the subnational, national, regional and global levels is given its attention, and any efforts at further extending the requirements of various types of data be put on hold until the issues relating to the current set of data are adequately resolved and the necessary financial and human resources required to fulfil this task are urgently mobilized.

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Notes

1 Although no precise definition of social statistics is available, ''social statistics are considered to comprise all areas of statistics relating to people and their living conditions: demography, health, education and training, labour, income, consumption and wealth, social protection and social cohesion, housing, mobility, time-use, culture and leisure and crime and justice'' (United Nations Statistics Division, 2003, p. 5).

2 Interestingly, perhaps the earliest census of the population was conducted in Egypt in connection with building of pyramids, while in India evidence of collection of population statistics dates back to the King Chandragupta Maurya (c. 395–296 BC).

3 For example, while both the NHDRs and MDGRs use data on prevalence of undernutrition among children (which is an indicator in Human Poverty Index-I in the NHDR and an indicator in the 'Eradicate Extreme Hunger and Poverty' dimension in the MDGR), the MDGR requires additional data on the indicator proportion of population below a minimum level of dietary energy consumption as well. Similarly, in the case of education, the HDRs use the literacy rate and combined primary and secondary enrolment ratio as indicators in the HDI and use the illiteracy rate in the Human Poverty Index, whereas the MDGRs require more specific process data in terms of net enrolment ratio in primary schooling and the proportion of pupils starting in grade I who reach grade V.

4 Financing the Development Goals: An Analysis of Tanzania, Cameroon, Malawi, Uganda and Philippines (http://www.undg.org/documents/243).

5 The Gender Empowerment Measure has been used in Japan and South Korea to formulate legislation. In the Philippines the HDR led to a presidential directive mandating all local governments to devote 20% of their revenue to human development priorities, and in Brazil the disaggregated HDI for the municipalities of the large State of Minas Gerais ensured that more tax revenues were allocated to those of its municipalities that ranked low on the index, as well as to those that performed poorly on a number of other social and environmental indicators (Fukuda-Parr and Shiva Kumar, 2003).

6 For example, Cambodia missed out on a census or survey for over 30 years. The first Cambodian population census since 1962 was conducted in 1998 (Lina, 2002).

7 In the case of the Viet Nam NHDR 2001, only a 3% sample of the data for 1999 Population and Housing Census was used due to non-availability of complete data when the report was prepared.

8 Female workforce participation rates are considered to be biased downwards in most countries due to the reluctance to report females as 'working' in most patriarchal societies. In specific cases such as HIV/AIDS, the stigma and discrimination associated with HIV may lead to poor reporting.
9 According to the Government of India (2001), coverage by the CRS was only 53% for births and 48% for deaths. The problem of non-registration is particularly acute in the rural areas.
10 The first Global HDR (UNDP, 1990, p. 32, Box 2.3) stated: ''The low value attached to women's work requires fundamental remedy: if women's work were more fully accounted for, it would become clear how much women count in development. To do that requires much better gender-specific data on development. There is a need to redesign national censuses, particularly agricultural surveys.''
11 The India National HDR (Planning Commission, 2002) also stresses the need for synchronization of independently carried out surveys of different agencies to check overlap and improve coverage of indicators. Government of India (2001) has recommended that the census should adopt the same definition as that of the National Sample Survey Organisation in order to maintain consistency of data across the sources.
12 Government of India (2001) pointed out that the definition of economic activity was expanded in census 2001 to include certain non-market activities, which while being very relevant in identifying these groups currently, causes problems in comparing data with the previous censuses.
13 Further details on the Marrakesh plan of Action available online (http://www.worldbank.org/data/results.html).

References

Burd-Sharps, S. and Jehan, S. (2002) *National Human Development Reports and Millennium Development Goal Reports: Mutually Supportive Exercises*, Human Development Report Office and Bureau for Development Policy, United Nations Development Programme, New York.

Fukuda-Parr, S. and Shiva Kumar, A.K. (2003) *Readings in Human Development*, Oxford University Press, New York.

Government of India (2001) Ministry of Statistics and Programme Implementation, *Report of the National Statistical Commission*, Government of India [http://mospi.nic.in/nscr/hp.htm].

Lina, H. (2002) 'Country paper on Cambodia', presented at the *Regional Seminar on Statistics for National Human Development Reports (NHDRs)*, Chiba, Japan, 31 October–2 November 2002.

Loup, J., Naudet, D. DIAL (2000) *The State of Human Development Data and Statistical Capacity Building in Developing Countries*, Occasional Papers, Human Development Report Office, New York.

Mahbub ul Haq Human Development Centre (1999) South Asia Human Development Report, *The Crisis of Governance 1999*, Oxford University Press, Karachi.

Nguyen, T., Van (2002) 'Meeting urgent needs for statistics for NHDRs and MDGRs, country paper of Vietnam', presented at the *Regional Seminar on Statistics for National Human Development Reports (NHDRs)*, Chiba, Japan, 31 October–2 November 2002.

Planning Commission (2002) *National Human Development Report India*, Government of India, Oxford University Press, New Delhi.

Prabhu, S.K. (2001) *Statistical Challenges in the Preparation of NHDRs and MDGRs and Statistical Capacity Building in Asia and the Pacific*, Human Development Resource Centre, United Nations Development Programme, New Delhi.

Stockholm Environment Institute and United Nations Development Programme (2002) 'Making green development a choice 2000', *China National Human Development Report*, Hong Kong.

United Nations Department of Economic and Social Affairs, Statistics Division (2002), *United Nations Millennium Development Goals Data and Trends, 2002*, report of the Inter-agency Expert Group on MDG Indicators, United Nations Secretariat, New York.

United Nations Development Group (2003) *Country Reporting on the Millennium Development Goals*, September, New York.

United Nations Development Programme (1990) 'Concept and measurement of human development', *Human Development Report 1990*, Oxford University Press, New York.

United Nations Development Programme (1992) 'Global dimensions of human development', *Human Development Report 1992*, Oxford University Press, New York.

United Nations Development Programme (1995) 'Gender and human development', *Human Development Report 1995*, Oxford University Press, New York.

United Nations Development Programme (1998a) 'Consumption for human development', *Human Development Report 1998*, Oxford University Press, New York.

United Nations Development Programme (1998b) *General Human Development Report, Papua New Guinea*, Colorart Ltd., Hong Kong.

United Nations Development Programme (1999) *Pacific Human Development Report Creating Opportunities, 1999, Suva Fiji Islands*, Suva, Fiji Islands.

United Nations Development Programme (2001) 'Doi moi process and human development', *Viet Nam HDR, 2001*, Political Publishing House, Hanoi.

United Nations Development Programme (2002a) 'Deepening democracy in a fragmented world', *Human Development Report, 2002*, Oxford University Press, New York.

United Nations Development Programme (2002b) Contributions to human development in Argentina, *General Human Development Report 2002, Argentina*, Buenos Aires.

United Nations Development Programme (2003a) *South Africa Human Development Report — The Challenge of Sustainable Development: Unlocking People's Creativity, South Africa*, Oxford University Press, Cape Town.

United Nations Development Programme (2003b) 'Millennium Development Goals: a compact among nations to end human poverty', *Human Development Report 2003*, Oxford University Press, New York.

United Nations Statistics Division (in collaboration with Siena Group on Social Statistics) (2003) 'Strategy and goals', presented at *Siena Group on Social Statistics', Expert Group Meeting on Setting the Scope of Social Statistics*, New York, 6–9 May.

APPENDIX 1. *Human Development Reports*: 1990–2005

Year	Global	Regional	National	Subnational
1990	1			
1991	1			
1992	1		2	
1993	1		3	
1994	1	1	3	
1995	1	2	31	4
1996	1	1	45	1
1997	1	2	64	2
1998	1	3	78	1
1999	1	4	70	1
2000	1	2	62	
2001	1	1	40	1
2002	1	4	35	5
2003	1	4	37	2
2004	1	3	20	6
2005	1		8	
	16	27	498	23

Source: Derived from http://hdro.undp.org

APPENDIX 2. Millennium Development Goals and indicators

Goals and targets	Indicators
Goal 1: Eradicate Extreme Hunger and Poverty	
Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1. Proportion of population below $1 a day (PPP values) 2. Poverty gap ratio (incidence x depth of poverty) 3. Share of poorest quintile in national consumption
Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children (under five years of age) 5. Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve Universal Primary Education	
Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15–24 year olds
Goal 3: Promote Gender Equality and Empower Women	
Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015	9. Ratio of girls to boys in primary, secondary and tertiary education 10. Ratio of literate females to males of 15–24 year olds 11. Share of women in wage employment in the non-agricultural sector 12. Proportion of seats held by women in national parliament

(*Continued*.)

Goals and targets	Indicators
Goal 4: Reduce Child Mortality	
Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate 14. Infant mortality rate 15. Proportion of 1 year old children immunized against measles
Goal 5: Improve Maternal Health	
Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, Malaria and Other Diseases	
Target 7: Have halted by 2015, and begun to reverse, the spread of HIV/AIDS	18. HIV prevalence among 15–24 year old pregnant women 19. Contraceptive prevalence rate 20. Number of children orphaned by HIV/AIDS
Target 8: Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of TB cases detected and cured under DOTS (Directly Observed Treatment Short Course)
Goal 7: Ensure Environmental Sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programmes to reverse the loss of environmental resources	25. Proportion of land area covered by forest 26. Land area protected to maintain biological diversity 27. GDP per unit of energy use (as proxy for energy efficiency) 28. Carbon dioxide emissions (per capita) [plus two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases]
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water	29. Proportion of people with sustainable access to an improved water source
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	30. Proportion of people with access to improved sanitation 31. Proportion of people with access to secure tenure [urban/rural disaggregation of several of the above indicators may be relevant for monitoring improvement in the lives of slum dwellers]
Goal 8: Develop a Global Partnership for Development*	
	Some of the indicators listed below will be monitored separately for the Least Developed Countries (LDCs), Africa, landlocked countries and small island developing states.
Target 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system	**Official Development Assistance (ODA)**

(*Continued*.)

Goals and targets	Indicators
Includes a commitment to good governance, development, and poverty reduction – both nationally and internationally	32. Net ODA as percentage of DAC donors' GNI [targets of 0.7% in total and 0.15% for LDCs] 33. Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water and sanitation)
Target 13: Addresses the Special Needs of the Least Developed Countries Includes: tariff and quota free access for LDC exports; enhanced programme of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	34. Proportion of ODA that is untied 35. Proportion of ODA for environment in small island developing states 36. Proportion of ODA for transport sector in land-locked countries **Market Access**
Target 14: Address the Special Needs of landlocked countries and small island developing states (through Barbados Programme and 22nd General Assembly Provisions)	37. Proportion of exports (by value and excluding arms) admitted free of duties and quotas 38. Average tariffs and quotas on agricultural products and textiles and clothing
Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	39. Domestic and export agricultural subsidies in OECD countries 40. Proportion of ODA provided to help build trade capacity **Debt Sustainability** 41. Proportion of official bilateral HIPC debt cancelled 42. Debt service as a percentage of exports of goods and services 43. Proportion of ODA provided as debt relief 44. Number of countries reaching HIPC decision and completion points
Target 16: In co-operation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of 15–24 year olds
Target 17: In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis
Target 18: In co-operation with the private sector, make available the benefits of new technologies, especially information and communications	47. Telephone lines per 1000 people 48. Personal computers per 1000 people

*The selection of indicators for Goals 7 and 8 is subject to further refinement.
Source: www.undp.org/mdg

APPENDIX 3. *Millennium Development Goal Reports*: 2001–2005

	Country	Regional
2001	21	
2002	45	2
2003	38	2
2004	13	1
2005	6	
	123	5

Source: Derived from http://www.undp.org/mdg/countryreports.html

APPENDIX 4. Fundamental Principles of Official Statistics

Principle 1	Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.
Principle 2	To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.
Principle 3	To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.
Principle 4	The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.
Principle 5	Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.
Principle 6	Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.
Principle 7	The laws, regulations and measures under which the statistical systems operate are to be made public.
Principle 8	Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.
Principle 9	The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.
Principle 10	Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

Source: http://unstats.un.org/unsd/methods/statorg/FP-English.htm