

UNESCO Institute for Statistics

The UNESCO Institute for Statistics was established in **November 1999**. A paper was presented to the UN Statistical Commission in 1999 to inform the Commission about the establishment of the Institute and to seek views on its role. This paper attempts to provide an update on the activities of the Institute and to invite participants in the Commission to contribute to the development of its work programme at this very early stage in its life. The Institute will be relocated from Paris to Montreal in Canada in August 2001. Since many of the existing staff will not move with the Institute a major programme of recruitment is underway.

1 Background information

1.1 The UNESCO Institute for Statistics (UIS) exists in order to foster a culture of evidence-based policy both nationally and internationally through the collection and use of high quality, timely data in education, science and technology, communications and culture.

1.2 There is an urgent need to improve the quality of existing cross-national statistics (their coverage, reliability, timeliness, and comparability) in order to ensure that they are fit for the required purposes. In addition, new indicators should be developed to reflect aspects of education, science and technology, communications and culture which have not been addressed adequately in the past and to meet emerging needs. In conducting cross-national data collections the UIS will be sensitive to the need to avoid over-burdening countries. Existing data are under-exploited and a priority of the work of the UIS will be to further develop the database to improve its accessibility and ease of use. Since it is important that data are used in an informed way these developments will also ensure that access to clear, complete and accurate metadata will be provided and users will be encouraged to use it appropriately. The UIS holds unique and important datasets and it is therefore critical that the data are preserved over time so that the historical perspective is not lost.

1.3 The Institute is carrying out fundamental reviews in order to help to determine the requirements for cross-national data relating to culture, communications, science and technology. It welcomes input from members of the Commission to these wide-ranging consultations. Although more information is already available with regard to the needs for education data, the establishment of the Institute is an excellent time for the evaluation of past strategies and the implementation of improvements. In this area too, contributions and suggestions will be gratefully received.

The Institute will employ the following main categories of action :

2 Guardianship of cross-national data

2.1 Consultations will be carried out on a regular basis with users and producers of data in order to identify the priority needs for cross-national policy information of a regional and international nature in relation to the broad fields of education, science and technology, communication and culture. Advice

will also be sought on strategies and co-operative actions to improve the scope, coverage and quality of the UNESCO statistical database. More intensive relations will be developed with national statisticians and policy-makers in co-operation with the UNESCO field offices so as to inform and consult them about new policy needs, statistical standards, methodologies and best practices, and to help them to better respond to UNESCO statistical enquiries. Networks of national statisticians working on similar issues will be supported by UIS staff in order that relevant experiences may be shared.

2.2 New international statistical surveys in UNESCO's fields of action will be designed and carried out to collect more policy-relevant data and to improve the quality of the information and accompanying contextual information. In its capacity as the Observatory for the Education for All programme the UIS will give priority to integrating EFA monitoring data into the regular statistical enquiries as well as to developing new EFA indicators. (ref. section 7 of this paper) The UIS will make increased use of new information and communication technologies to collect and deliver the data electronically, and provide support to countries in enabling them to manage these developments.

2.3 Existing partnerships with regional organizations and networks will be utilized in order to jointly organize regional workshops for the purpose of improving the quality of national statistics and to ensure that data submissions to the UIS meet acceptable standards. New partnerships of this type will be formed especially in regions where data quality is weakest. The current partnerships with international and inter-governmental organizations such as the OECD and Eurostat will be utilized in order to share data from Member States we have in common, to develop new data collections in harmony with one another, to agree on common standards and procedures and to learn from each other in order to improve the quality of cross-national statistics.

2.4 Greater exploitation of relevant data from secondary sources will take place so as to avoid duplication of data collection, to add rich new dimensions to existing data and, through the process of triangulation, to improve data coverage and quality. Similarly, data collection through alternative channels such as demographic censuses and surveys will be expanded in co-operation with the Member States and the agencies that organize these data collections. Data quality assurance procedures within the UIS will be enhanced and incorporated into the regular processing operations, including those for metadata, and good practice guidelines will be prepared so that the quality processes will be transparent.

2.5 The contents, functions and user interface of the UNESCO statistical database will be upgraded in order to increase on-line access and data dissemination in electronic forms whilst also ensuring that users without access to electronic facilities will be assisted to receive the data they need. A resource centre for data access and use will be created within the new accommodation of the UIS in Montreal. The archiving policy of the UIS will be completely overhauled taking advantage of the improved IT expertise and facilities available to the UIS in Montreal. Methods of incorporating statistical information into broader information bases which include contextual and policy material will be explored in the EFA observatory and may be shown to have a wider applicability.

2.6 It will not be feasible to incorporate all data needs within the regular data collection, so occasional ad hoc data collection exercises will be mounted. Where data collection takes place outside the UIS but elsewhere in UNESCO, the UIS will have an important quality assurance and co-ordination role.

The UIS's role within the international network of data-producing agencies will be taken very seriously through membership of the UN Statistical Commission and relevant ACC bodies in order to ensure that duplication of data collection is eliminated. As indicated above, this will entail data-sharing with other agencies and it means that the UIS must be a focal point within UNESCO for data collection.

3. The development of appropriate methodology

3.1 It is essential to carry out methodological work in order to improve existing procedures, to develop new methods of data collection and to meet new data needs as a result of emerging policy interests and the demands of international development goals. For example, the follow-up to the World Education Forum in Dakar calls for the development of better indicators for the systematic monitoring of both formal and non-formal basic education, early childhood development, learning achievement, and better measurements of literacy, whilst the World Science Conference in Budapest placed emphasis on developing science policy, monitoring and science education. Many other World Conferences have not yet been accompanied by the development of policy-relevant monitoring systems, thus demonstrating that there is scope for translating their outcomes into statistical targets. These targets can only be developed through wide-ranging consultations and the involvement of all interested parties including the Member States, international and regional organizations, and the civil society. The UIS has responsibility for ensuring that the international standards which relate to UNESCO fields of interest are kept up to date and meet the needs of partner agencies as well as national statisticians.

3.2 Not all statistical demands can be fulfilled by the UIS because of a lack of resources at UNESCO and because of the weak statistical capacities of many national agencies in the poorer countries. Even though extra-budgetary resources will be sought, methodological work will need to be prioritized. The proliferation of indicators has caused great concern within ECOSOC and the UIS will need to work in close partnership with other agencies to make sure that methodological development work is carried out by the most suitable organization and that there is no duplication of activities.

3.3 Methodological work should also relate to the procedures used by the UIS in ensuring that technical procedures such as imputing for missing data, calculating long-term projections, data validation, processing, dissemination and analysis take into account recent advances in statistics and technology.

4. Capacity-building in the collection and use of statistics

4.1 The demand for relevant, reliable and timely statistics and indicators among policy-makers and the international community has increased tremendously during recent years but the experiences of the EFA 2000 Assessment and of other recent UIS data collections show that a large number of Member States still suffer from weak statistical capacities and inadequate information to support policy- and decision-making. This is especially the case in relation to many line ministries since their staff are often not part of the statistical community within a country and may have an inadequate sense of the value of data integrity. The fast turnover of staff and their lack of professional training and career development, leaves these statisticians in a vulnerable position and they can be subject to pressure to

provide data which serves particular political ends. For national statistical capacity building efforts to be effective, the training of national statisticians at regional and national levels has to be relevant to their immediate needs and sensitive to their circumstances, but also must address the long-term sustainability of the statistical production.

4.2 A statistical capacity-building strategy will be developed in co-operation with the UNESCO programme sectors and partner agencies. It will be fully integrated with the main actions in regular data collection and methodological developments. Active partnership will be established with the relevant sectors and agencies in project identification, formulation, negotiation, implementation and evaluation in relation to national statistical capacity-building. Resources permitting, the UIS will participate in supporting sector analysis and policy reforms, and in multi-agency and multi-sectoral country assessment and programming (such as the Common Country Assessments/UNDAF/Poverty Reduction Strategy Papers) with a particular focus on strengthening national statistical capacities in UNESCO's fields of action. The strategy will take account of the interagency initiative PARIS21 (Partnerships in Statistics for the 21st Century) in order to ensure that there is no inadvertent duplication of work.

4.3 In collaboration with partner agencies, the UIS will organize regional and national workshops to train national statisticians in data collection and statistical production, and data users in analysis and interpretation. In Africa, a large number of the capacity-building actions will be delivered through the UIS staff based in Harare and Dakar, who form the NESIS team.

4.4 Outlines of the new concepts of statistics and indicators and the associated methodologies, together with the best practices in national statistical activities, will be documented in the form of operational technical guides and manuals which will include case study material and other practical examples. Some of these manuals may also outline alternative strategies together with guidance as to which is appropriate in particular circumstances to enable national statisticians to choose the right package of methodologies. These will be widely disseminated for use in training and also provided as references to aid statistical production at the national level. Assistance will also be given to help statisticians to produce their own codes of practice which will help them to ensure data integrity.

4.5 A team of external and internal consultants competent in the development and management of information systems will be established in order that expertise is available to the Member States on request, resources permitting. Quality assurance procedures will be developed so that the UIS is able to be confident in the quality of assistance being supplied.

5 The analysis and interpretation of the cross-national data

5.1 Relevant and reliable statistics and indicators are essential to the development and formulation of sound policies and for determining appropriate targets and monitoring progress. Very often data are under-exploited and under-utilized in the decision processes. It is essential for UNESCO to play a catalytic role in developing innovative approaches to statistical analysis and in spreading the practice of evidence-based policy-making. Such analysis will focus on data collected in UNESCO's fields of interest and their relationship to broader issues such as poverty reduction and human development.

5.2 The promotion of evidence-based policy-making can in part be achieved by disseminating more policy-relevant and easy-to-understand statistical information. The distribution of a wider range of statistical material which reaches out to a variety of audiences and which incorporates analysis which speaks directly to the international and national policy needs is an aim of the UIS. It is anticipated that a significant proportion of the value-added statistical analysis of this kind will be conducted by the UIS in partnership with staff from other parts of UNESCO – sectors, institutes and field offices. It will be necessary to develop a programme of research and statistical analysis at the UIS and to build networks and partnership with policy analysts and experts not only within UNESCO but also in research institutions and other regional and international organizations. A key goal is to develop analyses of the data in the UNESCO statistical database together with those from other sources to inform policy debates. Academic partners with relevant expertise will be sought and co-operation with the four Universities based in Montreal will prove especially fruitful in this regard.

5.3 The UIS will contribute statistical expertise to ensure that publications, where appropriate, include time-series analysis and projections in order to inform policy-makers of anticipated trends and scenarios. Publications will also flag shortfalls in meeting internationally-agreed development goals. These publications, which may be electronic, will be especially important in the context of EFA.

5.4 The UIS will work in close co-operation with national statisticians and researchers in order to help them to analyse data relating to their own countries in a comparative context. The experience gained in the World Education Indicators project will continue to be helpful in these activities. The possibility of national statisticians spending time at the UIS, funded by bursaries which might also enable them to study for a PhD at one of the Montreal universities, will also be explored as will the idea of an annual UIS summer school on data confrontation.

5.5 The UIS will develop a communications strategy to try to ensure that the results of statistical analyses are disseminated as widely as possible to inform policies. The UIS will also play an advocacy role to raise the importance of statistics in UNESCO's areas of interest.

6. Education Surveys 2000/2001

6.1 Although plans are being implemented for an expanded education survey in 2002, it is unreasonable to expect those with current information needs to wait until 2002 or 2003 for a response from the UIS to their demands. As a result, last year the Institute developed a new survey (**Survey 2000**) which aimed to obtain a small set of quality education data for the school year beginning in 1998. That survey is being repeated this year (to collect data for the school year beginning in 1999) and is now called **Survey 2001**.

6.2 Survey 2001 (and Survey 2000 before it) aims to collect the basic statistics necessary to calculate the set of key education indicators that are considered to be of highest priority. These indicators were chosen on the basis of their frequency of use by Member States, regional and international organizations and other main users. The list includes indicators such as gross and net enrolment ratios, student/staff ratios and selected indicators on education finance.

6.3 In order to support Survey 2001, ten regional workshops are being held throughout the world from March to June 2001 (following on from the regional workshops the UIS held in 2000), bringing together over 250 national statistical experts in the field of education from some 180 countries. The objectives of these workshops are:

- to examine issues related to the quality of Survey 2000 data and to discuss ways and means of improving data quality;
- to review the mapping of education systems into the revised ISCED97 structure, to identify problems in reporting data in this structure and determine appropriate alternatives for resolving these problems;
- to discuss and formulate strategies for the use of Survey 2000 statistics by Member States and determine how the UIS might assist with such plans;
- to identify national and regional issues in education and determine the feasibility of obtaining meaningful statistics that can inform debates on these issues (planning for Survey 2002);
- to determine special analytic and research projects for further elaboration on a regional basis;
- to prepare for the Survey 2001 data collection process, based on the successes and lessons learnt from the previous year's survey.

6.4 Using the data collected, a range of statistical publications are being prepared in consultation with the data providers, to be released at the next session of the UNESCO General Conference in October 2001. Publications will include regional reports, a global summary statistical publication, a thematic report and a CD-ROM of relevant data sets.

7 Education for All

7.1 In March 1990, the international community put education on the global agenda during the World Conference on Education for All (Jomtien, Thailand) when Governments set themselves the challenge of achieving universal primary education by the year 2000. Ten years later, the international community came together again at the World Education Forum (Dakar, Senegal), to examine the results of the decade in the most in-depth evaluation of basic education ever undertaken on a global scale. The EFA 2000 Assessment took stock of the status of education in some 180 countries and evaluated the progress that had been achieved during the 1990s. Its purpose was to generate vital information on all types of programmes, activities and services that aim to meet the basic learning needs of children, youth and adults.

7.2 The EFA assessment pinpointed the shortcoming in many countries which still exist today in achieving the goal of universal primary education. During the Forum, Governments reiterated their commitment to ensure that universal access to quality basic education is achieved and sustained by

2015. UNESCO was mandated to take the lead role in orchestrating global efforts to achieve EFA by 2015.

7.3 The EFA Year 2000 Assessment was instrumental in drawing attention to the vital role of statistics in EFA monitoring and education policy making and to the fact that data were not always available or in formats to be of use to policy-makers. Even when they were available, governments did not always take them into consideration in their educational decision-making.

7.4 Regular monitoring of the state of education in the world will be an essential part of the follow-up to Dakar. For this reason, the UIS has created the **EFA Observatory** within the UNESCO Institute for Statistics, in order to monitor and report on progress achieved in education on a national, regional and global level.

7.5 In its capacity as the EFA Observatory the UIS will give priority to:

- consulting data providers and users in countries and regions to find out their needs in the light of EFA action plans;
- integrating EFA monitoring data into the regular statistical surveys;
- developing new indicators and methodologies and improving existing ones;
- assisting countries to improve their capacities for data collection and analysis through training and other support.
- promoting awareness, analysis and use of data at the national level to inform policy debates;
- encouraging countries to develop adequate monitoring and early warning systems of their own based on their own national data;
- conducting surveys and case studies, and seeking partnerships with other organizations to bring in a richer range of information;
- issuing progress reports on advances towards the Education For All targets in print and electronic form.

7.6 One of the first tasks of the Observatory will be to develop a framework of pertinent indicators to examine progress towards the objectives of Education for All. New indicators will be developed to complement and extend the original set of 18 core indicators used for the 2000 Assessment. This is in order to make it possible to tackle more precisely questions that were not addressed adequately in the 2000 Assessment.

7.7 As part of this review, widespread consultations will take place with principal actors and partners, and especially the data providers and users. This process has already begun with Member States during a series of regional workshops conducted in June and July 2000, and will continue during the next

round of workshops being held during the first half of 2001. The UIS is interested in hearing from policy makers and data providers concerning the extent to which the indicators are appropriate for monitoring the new Dakar targets and whether there is a need to develop better indicators.

8. International Standard Classification of Education

8.1 The world's education systems differ considerably, both with respect to their structures and to their curriculum contents. As a consequence, it is often difficult for national educational policy-makers to compare their own education systems with those of other countries in order to draw useful lessons from other's experiences. For this reason, UNESCO has been concerned since the Organization's earliest days with the design of an **International Standard Classification of Education** that would facilitate comparisons of education statistics and indicators of different countries on the basis of uniform and internationally agreed definitions. UNESCO developed the first ISCED during the 1970s; the present 'revised' version, known as ISCED97 (to distinguish it from the original version), was formally adopted in November 1997.

8.2 ISCED97 is a framework for the compilation and presentation of national and international education statistics and indicators. It covers all organized and sustained learning activities for children, young people and adults including those with special educational needs. It can be utilized for statistics on many different aspects of education such as pupil enrolment, human or financial resources invested in education or the educational attainment of the population. The basic concepts and definitions of ISCED97 are intended to be universally valid and invariant to the particular circumstances of a national education system.

8.3 ISCED97 aims to take account of the new types of learning opportunities and education/learning activities available in many countries for both children and adults. Programmes of continuing education, special needs education and training outside the formal education system's institutional framework were not adequately covered in the past; the revised ISCED provides relevant criteria for the classification of such programmes. ISCED97 presents standard concepts, definitions and classification criteria to ensure international comparability in the classification of educational programmes by level of education and field of study. In the original ISCED, the definitions and criteria were limited in scope and were not always applied consistently. As a consequence, different countries sometimes assigned programmes of similar content and duration to different ISCED levels, which led to misleading comparisons between countries.

8.4 The principal guidelines to the revised ISCED are published in the ISCED97 document which is available from the UNESCO Institute for Statistics in all six of UNESCO's official languages. This document contains details of programme characteristics at each level of education, and a full breakdown of the 1- and 2-digit codes for each field of study. There is also a draft manual of guidance under review for the **levels of education** (the "Operational Manual"), which gives examples of particular programmes worldwide.

8.5 The classification of the **fields of study** has been further developed, and a manual containing proposed 3-digit codes and guidelines for their application is now the subject of a consultation exercise

with UNESCO Member States and classification experts. We hope to publish the final version of this manual in the near future.

8.6 In the year 2000, the UIS education data-collection programme (known as ‘Survey 2000’) was adjusted to implement these new standards, and Member States were requested to apply them in the reporting of education statistics from the school year beginning in 1998. Discussions held at a series of workshops aimed to secure region-wide consensus on the classification of similar programmes in neighbouring countries in order to ensure better comparability in the data reported.

8.7 This year, a new round of workshops is being held to examine the results of this exercise and to prepare for the data collection for the school year that began in 1999 (‘Survey 2001’). These workshops will review the implementation of the ISCED during Survey 2000 and will offer an opportunity for Member States to receive individual technical assistance. The UIS aims to involve both education and finance statisticians and policy makers, in order to support Member States in the provision of ISCED-conformant data, and to ensure that data are policy-relevant within countries and regions. The UIS welcomes feedback from ISCED users on their experiences in implementing ISCED97.

Contact details

Denise Lievesley
Director
UNESCO Institute for Statistics
7 Place de Fontenoy
75352 Paris 07 SP
France

Tel 33 1 45 68 23 78
Fax 33 1 45 68 55 20
e-mail d.lievesley@unesco.org