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Policy Paper for Change and Development in Higher Education

UNESCO

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Foreword

UNESCO has had a standing commitment to fostering the development of higher education and research since its foundation almost 50 years ago. As we approach the end of this century and prepare to enter a new millennium, we are witnessing an unprecedented development of higher education and increased awareness of its vital role for economic and social development. Yet higher education is in a state of crisis in practically all countries of the world. Although enrolments are on the increase, the capacity for public support is declining. The gap between the developing and the developed countries with regard to higher learning and research, already enormous, is becoming wider.

The current trends and new challenges facing higher education imply the need to rethink its role and mission, identify new approaches and set new priorities for future development. This has been the leitmotif of the debates on higher education initiated by UNESCO during its third Medium-Term Plan (1990-1995) at regional and international level. It is with the same conviction that the UNESCO Member States adopted a resolution at the twenty-seventh session of the General Conference in 1993, inviting me to 'pursue the elaboration of a comprehensive policy for the Organization covering the whole field of higher education'.

This policy paper is a response to that decision. It gives a synthesis of what UNESCO sees as the main trends in higher education and also attempts to formulate a perspective for the Organization concerning key policy issues in this field. It raises a number of pertinent issues to which our attention has been drawn by Member States and by the academic community. In view of the above, it formulates a basic rationale on which the process of change and development of higher education could be based and implemented. However, the paper is in no way intended to impose models or make rigid prescriptions; at best, it may serve as an 'intellectual compass' for the Member States and for those in charge of higher education in designing their own policies, by taking into account the inherent diversity and specific needs and conditions prevailing at regional, national and international level. The paper is also meant to be of use to UNESCO itself in charting out the main direction of its higher education programme.

This document should be considered as an important part of UNESCO's contribution to the ongoing debate on all aspects of education at the turn of this century, including higher education. It should also be seen as a starting-point for initiatives and activities promoting higher learning and research, and as an important step towards a revival of support for higher education worldwide.

The complex challenges facing higher education on the threshold of the twenty-first century call for the participation of many actors, and for a diversity of views and approaches. This document should therefore be regarded as complementary to work being done in this field by other international and regional organizations and bodies. However, like many other problems facing contemporary societies, those concerning higher education call for concerted and integrated action. I therefore take this opportunity to appeal for greater co-operation among all the actors to achieve our common goal - the further development of

higher education as an instrument for reaching sustainable human development.

Finally, I wish to express my sincere thanks to the Member States and to international governmental and non-governmental organizations as well as to UNESCO's many other partners for their insightful comments on the draft version of this policy paper.

Federico Mayor
Director-General of UNESCO

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Executive summary

1. The analysis and rationale for change and development in higher education at both system and institutional level presented in this policy paper stem from a worldwide reflection exercise on the **role**, main **trends** and **challenges** facing higher education in which UNESCO has been engaged during the last few years. It is also part of a broader process aimed at reinforcing UNESCO's role, in its areas of competence, in the light of current and potential political, social, economic and cultural developments.

11. The nature of the activities and functions of higher education and its diverse institutional framework means that this document is addressed to a wide range of people - from individual members of the academic community to all stakeholders and decision-makers, and to international organizations, including UNESCO itself. It is, however, primarily directed at the main actors responsible for the setting up and implementation of higher education policies at national and institutional level, as well as those who have an impact on international academic cooperation.

Trends in higher education

111. Recent developments in higher education are diverse and often specific to regional, national and local contexts. Over and above these differences, however, three main trends emerge which are common to higher education systems and institutions worldwide: **quantitative expansion**, which is nevertheless accompanied by continuing inter-country and inter-regional inequalities in access, **diversification** of institutional structures, programmes and forms of studies, and **financial constraints**. The widening gap between the developing and developed countries with regard to the conditions of higher education and research is of particular concern.

Challenges for higher education in a changing world

IV. Despite progress in many areas of human endeavour, the challenges of today's world are paramount. An overview of the main global trends shows a series of concurrent, sometimes contradictory, processes of: **democratization, globalization, regionalization, polarization, marginalization** and **fragmentation**. All of these have a bearing on the development of higher education and call for adequate responses on its part. Equally important are the shifting imperatives of economic and technological development, and the modifications in development strategies, which - as UNESCO also advocates - should pursue **sustainable human development** in which economic growth serves social development and ensures environmental sustainability. The search for solutions to the problems arising from these processes depends on education, including higher education.

Responses of higher education - a new vision

V. The responses of higher education to a changing world should be guided by three watchwords which determine its local, national and international standing and functioning: **relevance, quality** and **internationalization**. It is also in relation to these objectives that the role and contribution UNESCO can make to facilitate the process of change and development are formulated.

VI. The relevance of higher education is considered primarily in terms of its role and place in society, its functions with regard to teaching, research and the resulting services, as well as in terms of its links with the world of work in a broad sense, relations with the State and public funding, and interactions with other levels and forms of education.

VII. The need for relevance has acquired new dimensions and greater urgency as modern economies demand graduates able to constantly update their knowledge, learn new skills and with the qualities to be not only successful job seekers but also job creators in continuously shifting labour markets. Higher education has to rethink its mission and redefine many of its functions, particularly in view of society's need for lifelong learning and training.

VIII. One of the prerequisites for the successful functioning and management of higher education resides in good relations with the State and society as a whole. These relations should be based on the principles of **academic freedom** and **institutional autonomy** which are essential for the preservation of any institution of higher education as a community of free inquiry, able to perform its creative, reflective and critical functions in society. While the State may and should assume catalytic and regulatory roles, institutional self-governance in higher education should prevail. At the same time, the entire socio-economic environment compels higher education institutions to build up ties and linkages with the State and other sectors of society, and to accept that they are accountable to society in general.

IX. **Limited public funding** is one of the main constraints on the process of change and development in higher education. It is also a source of its current crisis and of the strained relations between the State and the academic community. Higher education institutions need to improve their management and to make more efficient use of the human and material resources available, thus accepting their accountability towards society.

X. Public support for higher education remains essential, but higher education institutions need to engage in an earnest search for alternative funding sources. Moreover, all stakeholders students, parents, the public and private sectors, local and national communities and authorities must join in this search. Nevertheless, the specific conditions prevailing in each country indicate that it would be erroneous to expect that alternative funding can bring higher education out of the current crisis and stop the process of deterioration now affecting many institutions, particularly in the developing countries.

XI. The introduction of **tuition fees** is a sensitive issue in higher education because it touches on many aspects of social justice and mobility, educational equity and the educational, social and fiscal policies of the State in general. It also has to be seen in the context of academic streaming which is in turn affected by existing tuition fees at earlier levels of the education system. Attention should also be paid to the possibility of introducing other forms of financing higher education.

XII. There is a risk that a policy of detachment of the State from higher education in matters of financing may result in excessive pressure for cost recovery, alternative funding and a narrow interpretation of the need for self-reliance. If higher education is to make a significant contribution to the advancement of society, the State and society at large should perceive it less as a burden on the public budget and more as a **long-term national investment** for enhancing economic competitiveness, cultural development and social cohesion. This is also the framework within which the problem of cost-sharing in higher education needs to be addressed.

XIII. The renewal of teaching and learning in higher education is essential for enhancing its relevance and quality. It calls for the introduction of programmes which develop the intellectual capacity of students, for improving the **interdisciplinary** and **multidisciplinary content of studies**, and for the use of methods of delivery which increase the effectiveness of the higher

learning experience, particularly in view of the rapid advances in information and communication technologies.

XIV. **Research** is not only one of the major functions of higher education but also a precondition for its social relevance and academic quality. The educational benefits of activities associated with research are often underestimated. These should be taken into account when decisions are made about funding academic research, especially as we are approaching a stage in development when the number of areas of common concern and joint investigation between science, technology and culture is rapidly increasing. Higher education should be seen as an indispensable partner in promoting these links.

XV. **Quality** has become a major concern in higher education. This is because meeting society's needs and expectations towards higher education depends ultimately on the quality of its staff, programmes and students, as well as its infrastructure and academic environment. The search for 'quality' has many facets and the principal objective of quality enhancement measures in higher education should be institutional as well as system-wide self-improvement.

XVI. **The assessment** and **enhancement of quality** should start with and actively involve the teaching and research staff, given their central role in the activities of higher education institutions. Human resources development policies, especially concerning recruitment and promotion, should be based on clear principles and well-defined objectives. They should stress the need for the initial and in-service training of academic staff and for more rigorous mechanisms in the selection and training of staff for administrative and management functions in higher education.

XVII. The **quality of students** represents an immense problem, especially in view of mass enrolment, diversification of study programmes and current levels of higher education funding. Under these conditions, governments and higher education institutions are adopting varying solutions. There is general consensus that the quality of students in higher education depends largely on the aptitude and motivation of those leaving secondary education - hence the need to re-examine such issues as the interface between higher and secondary education, and student counselling and orientation, as well as the need to foster the notion of responsibility towards society among students, particularly those benefiting from public support.

XVIII. The **quality of the physical and academic infrastructure** of higher education is important for its teaching, research and service functions, as well as for institutional culture, which is indispensable for keeping together highly diversified and often geographically scattered higher education institutions. Capital investment in infrastructure - from campus access roads, research laboratories and libraries to information highways - should be seen as public works forming an integral part of the overall efforts towards modernization of the economy-linked infrastructure.

XIX. **Quality assessment** is essential to the search for solutions which will enhance the quality of higher education. It is important that quality assessment should not be carried out with financial issues only in mind or be related mainly to those aspects of the overall functioning of higher education institutions which lend themselves more easily to quantitative measurement in the form of quality indicators. Due attention should be paid to the observance of the principles of **academic freedom** and **institutional autonomy**. However, those principles should not be invoked in order to militate against necessary changes or as a cover for narrowly interpreted corporatist attitudes and abuse of privileges that can, in the long run, have a negative effect on the functioning of higher education.

XX. The **internationalization** of higher education is first of all a reflection of the universal character of learning and research. It is reinforced by the current processes of economic and political integration as well as by the growing need for intercultural understanding. The expanding

number of students, teachers and researchers who work, live and communicate in an international context attests to this trend. The considerable expansion of various types of networking and other linking arrangements among institutions, academics and students is facilitated by the steady advance of information and communication technologies.

XXI. International co-operation should be based above all on partnership and the collective search for quality and relevance in higher education. The deteriorating conditions in which higher education institutions function, particularly in some developing countries, require **international solidarity**. In this respect, it is important to promote those programmes and exchanges which can contribute to reducing existing imbalances and facilitating access to and transfer of knowledge.

Change and development in higher education - the role of UNESCO

XXII. The trends and challenges facing higher education and its possible responses have direct implications for the work of UNESCO. They call for:

- **strengthening of UNESCO's role** in the development of higher education and research, in its capacity as the specialized agency of the United Nations system covering these fields;

- **commitmen**t of the Organization to those principles and values which should guide policies and strategies for change and development in higher education, particularly increased access, with due attention to equity;

- **promotion** of diversity in higher education, as a prerequisite for its enhanced relevance and quality;

- **furtherance** of academic freedom and institutional autonomy, as perennial values of higher education;

- **focusing its activities** in the field of higher education on promoting international co-operation, with particular emphasis on support for the strengthening of higher education and research capacity in the developing countries.

XXIII. The development of education, including higher education, through international co-operation has been a major field of action of UNESCO since its foundation. Achieving **basic education for all** and enhancement of opportunities for **lifelong learning** constitutes UNESCOís priority in the field of education. This objective goes hand in hand with the need for the renewal and advancement of education at all levels, including higher education. UNESCO will urge governments and other national and international institutions to consider higher education as a social, economic and cultural investment, and to create adequate conditions for its functioning.

XXIV. UNESCO's agenda in the field of higher education will continue to favour the **broadening of availability and participation** in higher education. Making higher education 'accessible to all on the basis of individual capacity', as stipulated in the Convention against Discrimination in Education adopted by UNESCO in 1960 and reinforced by subsequent international covenants, remains a major concern of the Organization.

XXV. In line with the concurrent trends which agree on the need for rethinking and reform of higher education systems and institutions, UNESCO focuses its action on relevance and quality as the key features of a forward-looking higher education policy. The Organization seeks to promote diversity among higher education institutions and systems. Furthermore, UNESCO emphasizes the need to pursue efforts towards further differentiation of study programmes as the

means to better adapt higher education to specific national and local needs, while not losing sight of the universality of knowledge and the paramount criterion of quality.

XXVI.UNESCO will make further efforts to respond to the prerequisites for informed decision-making and a necessary basis for monitoring and tracking change and developments in higher education, and to assist Member States and their higher education institutions to develop mechanisms and methods for ensuring quality and for evaluation. In meeting this responsibility, the Organization will continue to decentralize such activities to its Regional Offices and centres. The development of effective instruments for policy-making also require the Organization to pursue its work in the field of higher education, including the improvement of the coverage, reliability, concepts and definitions of statistics and indicators on science and higher education as well as promotion of research on higher education.

XXVII. Particular importance will be attached to promoting the principles of **academic freedom** and **institutional autonomy** as basic prerequisites for academic life and the functioning and development of higher education institutions. In view of the need to set internationally accepted standards in this respect, UNESCO will co-operate with Member States, with non-governmental higher education organizations and with the academic community as a whole in reinforcing these principles and enhancing the status of higher education teachers.

XXVIII. In accordance with UNESCO's constitutional mission, **the expansion of international co-operation** will continue to be both its major objective and its main mode of action in the field of higher education. UNESCO's agenda is to promote co-operation worldwide while searching for more effective ways to contribute to the strengthening of higher education and research capacity in the developing countries.

XXIX. The **UNITWIN/UNESCO** chairs programme will continue to be the Organization's major plan of action designed to reinforce networking and other linking arrangements among higher education institutions at the interregional, regional and subregional levels. The wide range of activities covered by this programme and its flexible organizational and financing approaches have confirmed it to be suitable for the transfer of knowledge, and well adjusted to the relevant needs of the regions, countries and institutions of higher education concerned. Further development in this area will be carried out, taking into account other initiatives of UNESCO such as the UNISPAR (University-Industry-Science Partnership) programme and MOST (Management of Social Transformations).

XXX. UNESCO’s ultimate objective in this process of change and development in higher education is overall renewal and a new vision of higher learning and research embodied by the concept of a **'pro-active university'** firmly anchored in local circumstances, but fully committed to the universal pursuit of truth and the advancement of knowledge. This should lead to the emergence of a new **'academic covenant'** which would put higher education in all Member States in a better position to respond to the present and future needs of sustainable human development.

I. Introduction

1. The second half of this century will go down in the history of education as a period of extraordinary expansion and qualitative transformations in **higher education**, which should be understood as one of the main parts of the functionally interdependent education system. It is usually composed of a wide range of types of institution where **studies and training** at higher level, t**eaching**, the conduct of **research** (even if its level of intensity and funding, range of fields and scholarly standing can differ between particular types of institution), and services to society are principal tasks and activities.

2. This development should be seen as confirmation that we are living at a time when without good training and research at the higher level, no country can assure a degree of progress compatible with the needs and expectations of a society in which economic development is carried out with due consideration for the environment and is accompanied by the building of a 'culture of peace' based on democracy, tolerance and mutual respect, in short - **sustainable human development.**

3. It is under such broad terms that higher education everywhere is being called upon to be better adjusted and more responsive to the demands of times in which new opportunities are accompanied by new challenges and upheavals. It is now clear that higher education, like many other levels and forms of education, is being asked to re-examine, in view of its relations with society and particularly with the economic sector, its institutional and organizational setting, funding arrangements and management. Higher education is being asked to develop, with all relevant partners, a **comprehensive vision** of its goals, tasks and functioning.

4. UNESCO considers that the relevance of its mission is greatly reinforced at the present time, in many fields within its mandate, including that of higher education and science. In the fulfilment of its constitutional functions, namely to 'maintain, increase and diffuse knowledge ... by encouraging co-operation among the nations in all branches of intellectual activity, including the international exchange of persons active in the field of education, science and culture', UNESCO relies on higher education and the academic and research community as a major partner in action. Moreover, it regards higher education as an intrinsic component of its overall programme in its main fields of competence - **education, science and technology, social and human sciences, culture and communication.**

5. In the context of current developments in higher education, international organizations active in this field are rethinking their policy agendas and programmes. UNESCO, in resolution 1.12 adopted at the twenty-seventh session of the General Conference in 1993, invited its Director-General to 'pursue the elaboration of a comprehensive policy for the Organization covering the whole field of higher education'. This policy paper is a response to that resolution.

6. The document is the outcome of a worldwide reflection exercise on the role, main trends and challenges facing higher education, undertaken by UNESCO in close cooperation with national authorities in charge of higher education, non-governmental organizations representing the academic community and those involved in research on higher education. In response to the challenges facing higher education in a rapidly changing world characterized by shifting imperatives of economic and technological development and by new needs for social and cultural development, UNESCO launched, at the start of the 1990s, a worldwide reflection exercise on the role, main trends and challenges facing higher education. This consisted mainly of regional consultations which discussed and adopted several programmatic documents such as the *Legon Statement on the Mission of the African University (Accra, 1991), the Agenda of Commitment for Higher Education in Latin America and the Caribbean (Caracas,*

1992), and the Sinaia Statement on Academic Freedom and University Autonomy (Sinaia, 1992). Several studies were undertaken by the regional bureaux and centres of UNESCO. At the same time, the Secretariat of the Organization, in collaboration with the United Nations University and non-governmental organizations in the field of higher education, initiated the elaboration of two synthesis volumes, the first, entitled *The University as an Institution Today,* by Alfonso Borrero Cabal, was published jointly by the International Development Research Centre (IDRC) - Ottawa and UNESCO in 1993, and a second, entitled *The Role of the University:* A *Global Perspective*, edited by Torsten Husen, in 1994 as a joint publication of the United Nations University and UNESCO.

Data and analyses included in the *Statistical Yearbooks* of UNESCO, the 1991 and 1993 editions of *World Education Report*, the *World Science Report 1990* as well as other UNESCO studies and documents provided the factual evidence used in the elaboration of this policy paper.

7. The meetings, publications and documents mentioned above have greatly contributed to building a **shared platform of ideas and a conceptual framework** for development and change which is reflected in the vision of higher education presented in this policy paper. Its elaboration should also be seen as part of a broader process aimed at reinforcing UNESCO's role in the light of the profound political, social, economic and cultural developments currently taking place. Special mention should be made of the forthcoming reports by the International Commission on Culture and Development and the International Commission on Education for the Twenty-First Century, which was set up by UNESCO under the chairmanship of Jacques Delors, President of the Commission of the European Communities. Its reflection on the new role and demands of education also covers the challenges facing higher education in the context of other levels and forms of education.

8. The nature of the problems facing higher education is such that comprehensive, system-wide as well as institutional-level reform is needed. Consequently, any attempt to formulate a policy framework must draw on a wide variety of view-points. Several agencies of the United Nations system have been involved in the current debate on higher education. Other intergovernmental organizations have undertaken a similar exercise in the context of their own programmes and agendas. Their experience has been of great assistance.

9. The paper begins with a brief analysis of what IJNESCO considers the main trends in higher education and which can serve as a basis for the formulation of the Organization's policy. These trends are drawn from diverse national experiences worldwide and from the views expressed by Member States, intergovernmental and non-governmental organizations, higher education authorities, decision-makers and researchers. The main challenges facing higher education in a rapidly changing world may be grouped under three main headings:

- **relevance**, meaning the role and place of higher education in society and there fore covering its mission and functions, programmes, content and delivery systems, as well as equity, accountability and financing issues, while emphasizing **academic freedom** and **institutional autonomy** as the principles underlying all efforts to assure and enhance relevance;

- **quality**, defined as a multidimensional concept embracing all main functions and activities in higher education;

- **internationalization**, the inherent characteristic of higher education which has been considerably enhanced throughout the latter half of this century.

10. One of the principal features of the paper is an **examination of how higher education can respond** to these challenges, both at system and institutional levels, and on the **contribution that UNESCO can make** to supporting Member States and their higher education institutions in developing their own policies and in facilitating the process of change and development.

11. The comprehensive character and structure of this policy paper means that it is addressed to a broad spectrum of people. They range from individual members of the academic community to stakeholders and decision-makers in higher education and international organizations, including UNESCO, in view of its role as the specialized United Nations agency in this field.

II. Trends in higher education

12. Key developments in higher education over the last quarter of a century are **quantitative expansion**, which has nevertheless been accompanied by continued inter-country and interregional inequalities in access, **differentiation of institutional structures, programmes** and **forms of study**, and **financial constraints**. The latter has become increasingly detrimental to the overall functioning of higher education, has led to a decline in academic quality and is putting a strain on research activities, even in countries with a strong academic base and tradition. Inability to keep pace with scientific and technological developments - UNESCO's *World Science Report 1993* shows that more than 80 per cent of world research and development (R&D) activities are carried out in just a handful of industrialized countries - means there is a widening gap between the developed and developing countries in this respect.

Quantitative expansion

13. **Quantitative expansion** can be observed in student enrolments in higher education all over the world even if the rates of growth show substantial differences from one region or country to another. This overall trend is due to several factors: demographic growth, significant advances in the provision of primary and secondary education which have meant that more young people are eligible to seek admission to higher education; the economic growth experienced by many countries and regions, and awareness that this development correlates well with investment in higher education. Another major reason is the emergence of independent and democratic countries which have seen in higher education a key instrument not only for their future economic development but also for the social, cultural and political change required to remove the vestiges and inheritance of colonialism and other undemocratic systems, to foster national identity and to develop local human resources and capacities to receive and apply knowledge and technology.

14. UNESCO's statistical data clearly demonstrate this process of growth. **Enrolments in education at all levels grew** from 437 million in 1960, representing some 14 per cent of the world's population, to 990 million in 1991, or 18 per cent of the world's population. The number of students in higher education grew even faster from 13 million students in 1960 to 28 million in 1970, 46 million in 1980 and 65 million in 1991. The figures for the developing countries show a particularly rapid rate of growth - from 3 million students in 1960 to 7 million in 1970, 16 million in 1980 and 30 million in 1991. As a consequence, the proportion of student enrolments from the developing countries increased from 23.1 per cent in 1960 to 46.2 per cent in 1991. In some regions the growth in enrolments appears spectacular: from 100,000 students in 1970 to 1 million in 1991 in sub-Saharan Africa, from 400,000 in 1970 to 3 million in 1991 in the Arab States, from 4 million in 1970 to 18 million in South and East Asia, and from 2 million in 1970 to 8 million in 1991 in Latin America and the Caribbean.

15. However, when interpreting these trends, it is necessary to bear in mind the very low starting base of higher education in the developing countries and the high rate of population growth there. It must also be recalled that the younger population has been growing continuously in the developing countries while most developed countries have experienced an increase in their older population.

16. To put enrolment increases into perspective it is necessary to relate them to the corresponding school-age population. This ratio, expressed as a percentage, gives an idea of the capacity of access to a given level of education. Enrolment ratios of the 18 to 23 age-group indicate considerable inequalities among the principal world regions. The figures confirm a fairly steady growth overall - from 9.6 per cent in 1960 to 14.8 per cent in 1970 and 18.8 per cent in 1980, followed by a slight decrease to 18.6per

cent in 1990, rising again to 18.8 per cent in 1991. Over the same period, the enrolment ratio in the developed countries showed a steadier increase and at a much higher level - 15.1 per cent in 1969, 27.1 per cent in 1970, 30.7 per cent in 1980 and 40.2per cent in 1991. The corresponding ratios for the developing countries were: 7.3 per cent in 1960, 10.1 per cent in 1970, 15.1 per cent in 1980 and 14.1 per cent in 1991.

17. This **inequality of access** becomes particularly obvious when considered in terms of the number of students per 100,000inhabitants, which is a revealing indicator of the overall level of development of higher education in a given country or region. In 1991, this number varied from over 5,000 students in North America to more than 2,500 in practically all the developed countries. Only a few developing countries have a ratio within this range and the vast majority have far fewer students. Particularly worrying is the situation in sub-Saharan Africa, where the ratio is less than 100 students per 100,000 inhabitants. This means that young people's opportunities to pursue higher education in the region are 17 times lower than in the industrially developed countries (on average, they are four times lower for young people in all the developing countries). As underlined in UNESCO's *World Education Report 1993*, the 'higher education gap' between the countries of sub-Saharan Africa and the rest of the world is one of the most striking disparities in education today.

18. It is also significant that the expansion of student enrolment has been concentrated in study programmes involving lower spending on personnel, equipment and overall functioning than in more resource-demanding fields of study such as the natural sciences and technology. While the overall growth in student enrolment has also meant broader access of under-represented categories such as women, ethnic minorities and students from low-income families or rural areas, greater equity in access to higher education must remain an objective of any forward-looking policy.

19. Trends concerning **women's participation in higher education** attest to what can be achieved when adequate policies are adopted. UNESCO's statistics show that the percentage of women in the total student population in higher education increased from 34 per cent in 1960 to 43 per cent in 1980 and 45 per cent in 1991 (it is estimated that it will stay at about 44 per cent until the year 2025). Although appreciable progress has been made, there are still noticeable differences between the major regions of the world. In 1991 the percentage of women students was 27 per cent in sub-Saharan Africa, 33 per cent in East Asia, 36 per cent in South Asia and 37 per cent in the Arab States. Concern has also been expressed that female enrolment is often concentrated in certain clusters of fields of study such as medical care and teaching, while women are under-represented in science and technology and in postgraduate studies that lead to an academic career.

20. UNESCO's projections for enrolment in higher education show an increase in the number of students worldwide from 65 million in 1991 to 79 million in the year 2000, 97 million in 2015 and 10() million by 2025. The need to develop **mass quality higher education** will represent a major challenge in the years to come. Projected enrolments in the developing countries also show a strong increase: from 30 million students in 1991 to 40 million in the year 2000, 50 million in 2015 and 54 million in 2025. However, in view of the projected population growth over the same period, the inequality in opportunities for higher education will persist: while participation in higher education should cover about half of the eligible population in the developed countries, less than 10 per cent of the population will be enrolled in higher education in the developing countries.

Diversification of structures and forms

21. Profound changes in the institutional structures and forms of higher education as well as methods of teaching, training and learning have been or are being undertaken by national authorities and by the institutions themselves. One of the direct results has been the **diversification** of higher education in practically all world regions. Although universities in particular, which cherish their long-established traditions, are somewhat resistant to change, higher education as a whole has undergone a far-reaching transformation in a relatively short period of time.

22. The reasons for these changes are both external and internal. Among the **external factors**, the following have been particularly relevant for the process of diversification:

- increased social demand for higher education and the need to cater for a much more diversified clientele;

- drastic cuts in spending on public higher education, thus compelling institutions to design alternative, more cost-effective programmes and delivery systems;

- constantly changing labour market needs which have required higher education institutions to make provision for training in new professional, technological and managerial fields and in new contexts, as a result of the globalization and regionalization of economies.

23. The following three **internal factors** have been pertinent, particularly for the reorganization of teaching and research activities in higher education:

- enormous advances in science, resulting in the development of academic disciplines and their further diversification;

- growing awareness of the need to promote interdisciplinary and multidisciplinary approaches and methods in teaching, training and research;

- rapid development of new information and communication technologies and their growing applicability to various functions and needs in higher education.

24. The cumulative outcome of the processes outlined above is a pronounced diversity within the national systems of higher education, mainly concerning institutional structures, programmes, student population and funding sources. The internal complexity of national systems is such that hardly any taxonomy, however flexible, can make a clear-cut distinction between various types of institution and programme. There is, nevertheless , a certain degree of similarity in the way the individual institutions see their place in the higher education system. The identification and analysis of some particularly distinctive traits are a relevant indicator of past changes, and can also signal the likely direction of development.

25. The following dichotomous, but not necessarily bipolar, differentiations within many higher education systems have been observed during recent years concerning:

- **University and non-university types of higher education institution.** Even if there are noticeable variations among universities themselves concerning the amount and quality of research, the number of academic disciplines and study programmes and so on, they are nevertheless significantly different from non-university higher education institutions.

- **Size**. Higher education institutions range from small to medium-sized and large institutions with corresponding differences in the number of students and staff. Large institutions are frequently located in urban centres where they may be major employers. When higher education institutions function in several localities, they are often multi-campus organizations accommodating various affiliated colleges and institutes as well as postgraduate or professional schools. Some function as 'federated' or 'comprehensive' universities.

- **Academic profile and level of study.** Certain institutions have a disciplinary specialization such as agriculture, medicine, teacher training, social sciences or physical education, but the current trend is towards a more comprehensive disciplinary context. Closely linked to this trend is diversification of levels of study. The programmes usually classified as undergraduate, graduate and postgraduate and which lead to one of the three main types of degree - bachelor, master and doctor (or their national and professional equivalents), are the main forms of certification in higher education. However, many functions associated with higher studies and training are now taking place in environments other than traditional higher education institutions. These programmes often respond to the specific learning needs of a highly diverse clientele for example by providing distance learning courses - and answer the demands of further professionalization and the constantly changing labour market. Their certification raises problems of both an academic and professional nature, including the need to grant academic recognition to skills acquired outside academic institutions.

- **The student body.** For economic and social reasons, the number of part-time,

non-degree-course students is increasing. Furthermore, even full-time students are tending more often to begin studies after some work experience or to alternate periods of work with periods of study. Consequently, the traditional age structure of the student body is becoming more diversified.

- **Funding sources** and proprietary status. Higher education institutions fall into three major categories: public, private and mixed. The proportion of students in private institutions is on the increase, reaching over 50 per cent of total enrolments in some countries, mostly developing ones. The recent emergence of private higher education institutions and professional schools, especially in Central and Eastern Europe, meant that laws had to be passed to cope with this new sector. It is generally agreed that, at least from the point of view of academic standing, the differences between private higher education institutions are greater than those within the public sector. It should also be pointed out that there can be substantial differences even within a given national system concerning the legal status and academic accountability of different private higher education institutions.

26. Other types of differentiation can be discerned in higher education, although they are less relevant to the ongoing diversification process. Thus, in certain national systems a distinction can be observed between institutions which, by their character and location, have a national mission and those which cater for the needs of a particular region or even locality. On the other hand, certain institutions, particularly professional schools, are international in character. There are also regional institutions serving the needs of several small States, particularly island States, which lack the economies of scale that would enable them to establish fully fledged institutions of their own. Other institutional distinctions can be made between secular and religious institutions and although this is increasingly uncommon - between gender- specific institutions.

27. It would be erroneous to present any of tl1e types of institution and programme described above as optimum responses or models. It might be tempting, for instance, to postulate that if wider access to and provision of higher education at a lower cost were the desired goals, then differentiated institutions, preferably distance education-based and predominantly private, would be the solution. However, one should not lose sight of the fact that a decision taken about one component, function, mission or structure in a higher education system does not leave the others unaffected. Diversification is a most welcome trend in higher education today which should be supported by all the means available. But underlying all decisions geared towards promoting diversification must be concern to ensure the **quality** of institutions and programmes, **equity** with regard to access and the preservation of higher education's **mission** and **function**, with full respect for **academic freedom** and **institutional autonomy.**

Constraints on funding and resources

28. The correlation between investment in higher education and the level of social, economic and cultural development is well established. There is, therefore, concern about the continued demand for quantitative expansion in higher education within the existing pattern and level of its financing. In the majority of cases, the growth in the number of higher education students has not been accompanied by increases in the allocation of resources in real terms, thus obliging many institutions to make cutbacks in their budgets, study programmes, modernization of infrastructure, library holdings, international co-operation and even academic staff. Shortage of funds combined with growing public awareness of how these are allocated has often brought about a reduction of State funding for higher education, in both developed and developing countries. Funding constraints have affected all types of higher education institution, even the best endowed.

29. Meeting rising social expectations about higher education when resources are diminishing presents major difficulties for the developing countries, particularly where fiscal constraints deriving from the need to control public budgets have been further affected by the consequences of structural adjustment policies. According to UNESCO's statistics, developing countries spend a much higher proportion of their GNP on the public higher education sector. But even when

relatively high priority is given to higher education, these countries are still far from able to allocate the level of support they need or that can be found in the developed regions of the world. On average expenditure per student in absolute terms is ten times lower in the developing countries than in the industrialized world. Such problems reveal a policy dilemma with regard to public spending on higher education: the poorer the region, the higher the relative cost per student, estimated in terms of the percentage of GNP allocated to higher education.

30. Hardly any country can nowadays support a comprehensive system of higher education from the public purse alone. Moreover, given the state of the economy in a number of regions and persistent State and local budget deficits, it seems unlikely that this trend will be reversed in the coming years. The call to seek alternative sources of funding is part of the current 'policy landscape' in higher education. As a consequence, there is enormous pressure for a modified **distribution of cost-sharing responsibilities**, through the introduction and/or increase of tuition fees and other study-related charges, and through the encouragement of various **income-generating activities** such as contract research, a broad range of academic and cultural services and short-term courses. The search for alternative funding has proved much more difficult for the developing countries.

Enhanced internationalization

31. Recent developments in education and science have reinforced the validity of the argument that since knowledge is universal, its pursuit, advancement and dissemination can be greatly enhanced by the collective efforts of the international academic community. This is the reason for the ingrained international dimension of academic life in general, encompassing higher education institutions, scientific societies and student associations. The particular attention paid to the internationalization of the content and context of higher education functions and the growth of student and staff mobility gain additional significance in the light of current trends in global trade, economic and political integration and the growing need for intercultural understanding. The expanding number of students, teachers and researchers who study, work, live and communicate in an international context, a phenomenon facilitated by new telecommunications technologies, affirms this overall positive development.

32. According to UNESCO statistics, the number of people pursuing higher education studies outside their country of origin increased by almost 30 per cent over the last decade: from about 920,000 in 1980 to about 1.2 million in 1990. Most of these (more than 750,000 in 1990) came from the developing countries. However, the same statistics indicate that the overall increase in the number of students pursuing studies abroad is not keeping up wit the absolute growth of higher education enrolment worldwide. Therefore, in percentage terms, student enrolments in higher education are tending to become less 'international' in character. This is not necessarily a matter for concern since it could be an indication of the increasing capacity of the developing countries to train their own students at home. But it is also important to consider these developments in the context of emerging patterns, forms and directions of student and academic staff mobility.

33. Much student mobility takes place outside the framework of any structured or organized exchange programme. Many countries and institutions regard higher education as a significant 'export segment' of their services and a source of additional income, particularly since most foreign students pay the full cost of their tuition. The major beneficiaries are the higher education institutions in the developed world, even if in some cases, mainly at the advanced level, the host countries and their institutions share the cost of studies. The overall consequences of this trend are already reflected in the composition of the international student body, with the number of students from developed countries increasing faster than the number from developing countries. Moreover, some 97 per cent of students from the developed countries who undertake studies abroad go to another developed country, so that student mobility is becoming more North-North and less South-North. In other words, while the benefits of study abroad are increasingly recognized, the costs involved make it a privilege for those countries (or students) that can afford it. Proof of this is the fact that among foreign students from the developing countries, numbers are declining everywhere except in Eastern Asia and Oceania

regions where several countries have made significant economic progress in recent years.

34. The risks of external brain drain have for some years been a major dilemma for international co-operation in higher education, particularly in its more traditional -forms where extensive absence from the home country or academic institution is the norm. The overall adverse effects of the brain drain on developing countries are well known and in most eases are not counterbalanced by the financial remittances sent back by those employed abroad or by other beneficial side-effects. According to the 1992 Buman Development Report of the United Nations Development Programme, nearly one third of Africa's highly skilled personnel had moved, mainly to European countries, by 1987 and up to 60,000 middle and high-level managers and other categories of personnel moved between 1985 and 1990. The external brain drain has also affected other regions. The scale of the loss of this human capital from the developing to the developed world is to some extent related to the fact that the latter countries take account of the formal level of educational and professional credentials in their immigration policies.

35. The problem of long-term external brain drain is linked to student and academic mobility, but it is not entirely and exclusively caused by it. It is part of a much wider phenomenon of regional and international migration resulting from interrelated economic, social and political factors. It is also indicative of the strained state of economic, social and political affairs in many parts of the world. Study abroad can be considered as one of the contributory factors to the migration of highly qualified human capital and talent. However, a large number of those involved in the brain drain phenomenon have in fact been educated in their own countries. The lack of local incentives and opportunities for the professional advancement of young researchers and graduates can become a prevalent factor conducive to external and internal brain drainboth being detrimental to the functioning and long-term development of higher education.

III. Challenges for higher education in a changing world

Outlook on major challenges

36. The trends presented above are essential for understanding the conditions in which higher education functions at present and will continue to function at least for the foreseeable future. They are affecting other equally important and challenging issues of higher education such as public and private financing and resource allocation; maintaining and improving the quality of academic work; relevance, efficiency and effectiveness; the reform of teaching; and the whole range of issues related to the exponential expansion of scientific information, as well as to the impact of new communication technologies. They all have a strong bearing on the policy debate in higher education. But it is developments at the broader, societal level - global, regional, national and local - that ultimately call for a fresh look at the mission, roles and functions of higher education.

37. Despite enormous progress in many areas of human endeavour, today's world is beset with tremendous problems and challenges, dominated by the demographic changes due to strong population growth in some parts of the world, frequent outbreaks of conflict and ethnic strife, hunger, disease, persistent poverty, homelessness, long-term unemployment and ignorance, and by problems related to protection of the environment, securing peace, democracy, respect for human rights and the preservation of cultural diversity. Many long-standing disputes and differences within and between countries in some parts of the world have become not only more visible but also more persistent when ideologically inspired 'camouflaging' is no longer possible. In order to deal with these problems, urgent action must be taken by the international community in a spirit of solidarity and with a clear understanding of countries' common interests.

38. Current international trends are characterized by a series of concurrent, sometimes contradictory, processes:

- **Democratization**, which can be seen in the removal and collapse of many totalitarian regimes and in the steady advance of democratic forces. This serves as the foundation for development and collective action aimed at guaranteeing peace and respect for human rights.

- **Globalization**, reflecting the growing interdependence on a world scale of national and local economies and trade, as well as the need to adopt a global approach in order to cope with the resulting problems.

- **Regionalization**, in which States form groupings to facilitate trade and economic integration as a means of reinforcing their competitiveness. Regional arrangements may also be useful in matters of education, culture, environment, labour markets and infrastructures .

- **Polarization**, which is evident in increased inequalities on a global, regional and national scale and results in a widening gap between rich and poor countries and populations, with the whole array of political, economic and social consequences this process entails.

- **Marginalization**, which is clear from the international or local isolation of a number of countries as well as of certain segments of the population because of various forms of underdevelopment.

- **Fragmentation**, which foments social and cultural discord, and, in its extreme form, can lead to 'atomization', through attempts to divide States and local communities along ethnic, tribal or religious lines.

39. The emergence of a collective will for more efficient action at all levels to set development on a new course has also prompted the United Nations and its Specialized Agencies,

programmes and funds to search for new approaches. This line of action has been reflected in the agendas, debates and decisions of various international fora held under the auspices of the United Nations. Among those which have been considered in this policy paper are:

- the United Nations Conference on Environment and Development (June 1992, Rio de Janeiro) which adopted *Agenda 21* as a blueprint for action for global sustainable development into the next century;

- *Agenda for Peace*, which sets out the objectives, principles and possible measures to be taken up in order to ensure peace and security, adopted by the United Nations in 1992;

- the World Conference on Human Rights (June 1993, Vienna), the decisions of which reinforced the view that development is a universal right and an integral part of human rights;

- the International Conference on Population and Development (September 1994, Cairo), which pointed to the corner-stone role played by education in coping with the population factor in the current and future development agenda.

40. The common denominator of the views set out in these documents is the strong recommendation for concerted action by all concerned - States and governments, intergovernmental organizations, business and professional communities, non-governmental organizations, the media and the public at large in order to shape the policies, attitudes and modes of action of the community towards **sustainable human development.** There are clear indications that this process will gain further momentum in the context of the Agenda for Development being prepared by the United Nations and in the wake of such major international events as the World Summit for Social Development (Copenhagen, 1995) and the Fourth World Conference on Women (Beijing, 1995).

41. There is unanimous agreement, fully endorsed at numerous international fora and in major policy-setting documents, that the *sine qua non* condition for humankind to cope with the challenges it is facing at present resides in **human resource development**, understood not in its narrow managerial meaning, but in a broader sense in which education and training play a major role. Access to higher education and to the broad range of services it can render to society is part and parcel of any sustainable development programme in which high-level human expertise and professional skills are required.

Shifting imperatives of economic and technological development

42. One of the critical economic challenges facing many countries, including the most industrialized, is **how to enhance their ability to adapt to changes** in the economy, technology and international trade. The pace and depth of those changes are unprecedented and affect many domains of human activity. They create new opportunities but also pose numerous problems, particularly with regard to the world of work Developments in this domain go beyond the usual ups and downs of economic fluctuations. It is also increasingly understood that the impact of economic and technological change is such that if not dealt with in time and in an adequate manner, it can unravel a whole set of social and political problems with inevitable local, national, regional and international consequences. Much is expected of education and training in order to cope with these shifting imperatives.

43. The impact of technological development, particularly in information and communications, is such that all countries, regardless of their level of industrial development, have to use globally accepted standards and equipment. This applies not only to **'hardware'**, but also to organizational structures and the human factor - **'humanware'**. This is dependent on or related to education, particularly at the vocational and higher levels.

44. The consequences of the above developments are particularly relevant for higher education, since it is this level which, in co-operation with vocational and technical education, is engaged in the development of a quality work-force on which depends the creation of quality jobs.

New development strategies and higher education

45. The search for solutions to the challenges outlined above has to be seen in the context of

national and local cultural and social values. These solutions must also be in harmony with the principles on which societies wish to base their international social, economic and cultural relations. Whatever the conclusion, links with society as a whole are essential in the concept of the higher education institution and its nature as a place of encounter for those motivated by a passion for learning and committed to sharing existing knowledge and searching for new knowledge.

46. Research into modern social and economic development shows that it cannot flourish inside rigid or imposed structures. The failure of development strategies based on the rigid transmission or imposition of economic models is one lesson drawn from practical experience, particularly in sub-Saharan Africa, Latin America, and Central and Eastern Europe. This conclusion also applies to the problems facing higher education. One of the main findings of the UNESCO consultations organized in preparation for this policy paper was that more and more people and institutions have become aware that, in all regions, the rigid adoption of foreign concepts and values and the neglect of regional and national cultures and philosophies have had negative repercussions on education. This finding should be borne in mind by States undertaking higher education reforms.

47. The basic premises of the concept of indigenous and sustainable development were formulated in 1991 by the United Nations in its International Strategy for Development, which was subsequently approved by the General Assembly. It considers that economic development should be based on two main foundations: the reduction of poverty and the development of human resources. Higher education has become, more than ever, an important partner for all concerned with these problems. Human development and the building of more co-operative and participatory relations in society are directly related to the effective use and development of existing educational opportunities, including at higher education level.

48. From the above brief analysis of challenges for social, economic and cultural development in a rapidly changing world it becomes clear that:

- Higher education stands out as one of the keys to setting in motion those broader processes which are necessary to cope with the challenges of the modern world.

- Higher education and other academic, scientific and professional institutions and organizations, through their functions in teaching, training, research and services, represent a necessary factor in development and in the implementation of development strategies and policies.

- A new vision of higher education is needed which combines the demands for universality of higher learning with the imperative for greater relevance, in order to respond to the expectations of the society in which it functions. This vision stresses the principles of academic freedom and institutional autonomy while at the same time emphasizing the need for accountability to society.

IV. Responses of higher education - a new vision

49. The options to be considered and decisions to be made by policy-makers at the international, regional, national and institutional levels should be guided by the three watchwords which determine the strategic positioning of higher education in society as well as its internal functioning - **relevance, quality** and **internationalization .**

Relevance of higher education

50. **Relevance** is considered particularly in terms of the role of higher education as a system and of each of its institutions towards society, as well as in terms of the latter's expectations with regard to higher education. It must thus include matters like democratization of access and broader opportunities for participation in higher education during various stages of life, links to the world of work and the responsibilities of higher education towards the education system as a whole. No less important is participation by the higher education community in the search for solutions to pressing human problems such as population, environment, peace and international understanding, democracy and human rights. The relevance of higher education is perhaps best expressed through the variety of 'academic services' it renders to society. In the years to come, the types and methods of delivery of these services will need to be redefined and renegotiated.

Relations with society as a whole

51. The policy debate on the role of higher education in a changing world has to be based on a judicious balance between the preservation of those features which should remain as part of the educational and cultural heritage and the changes which are essential to preserve the role society accords to higher education. The aim should be to make higher education more responsive to the general problems facing humanity and the needs of economic and cultural life, and more relevant in the context of the specific problems of a given region, country or community.

52. Responses to the challenges listed earlier necessarily imply an education dimension including higher education. For this reason shaping of national and institutional higher education policies concerning the missions and functions of higher education means dealing with basic questions such as:

- How can higher education and its various institutions contribute to socio-economic change and help to promote sustainable human development?

- How can higher education, and particularly teaching and research, contribute to the organization of modern society and be more closely involved in actions aimed at reducing poverty, protecting the environment, improving health care provision and nutrition, promoting the principles of civil society and developing other levels and forms of education?

- How can higher education respond to the changes in the world of work and civic culture needed to answer these challenges (which means developing academic and professional qualifications as well as civic and personal qualities)?

These questions can be summed up as follows: **what is** and **what should be the role of higher education in present and future society?**

Higher education and the world of work

53. Two parallel trends determine the relationship between higher education and the world of work. Firstly, higher education is moving towards a mass enrolment system as modern economies become increasingly knowledge intensive and therefore depend more on graduates of higher education, who constitute a 'thinking work-force'. Secondly, graduates will have to accept the need to keep changing jobs, update their knowledge and learn new skills. The world of

work is being radically redefined and a large part of the specific knowledge that students acquire during their initial training will rapidly become obsolete. Continuous and interactive partnerships with the productive sector are essential and must be integrated into the overall mission and activities of higher education institutions. But it should be emphasized that higher education has to view its relations with the world of work from a long-term perspective and in broad terms.

54. Although higher education institutions are not the only ones in modern society providing professional training of highly qualified personnel, this nevertheless remains one of their major responsibilities. Universities and other higher education institutions are still considered a particularly appropriate place for the overall training of those leaving secondary education in many academic disciplines and on which further professional training can be based. They also provide an appropriate setting for young people to develop skills essential for effective collaboration between individuals with varied professional and cultural backgrounds. This traditional function has to be seen in the context of the growing need for 'educational services', as society moves towards a model of **lifelong learning for all**, which is gradually replacing the prevailing model of selective and concentrated learning and study for a limited period. Only a sufficiently diversified and flexible system of access to and provision of higher education can meet the challenges of a rapidly changing labour market.

55. New conditions in the world of work have a direct influence on the aims of teaching and training in higher education. Merely increasing curriculum content and students' work-load cannot be a viable solution. Preference should therefore be given to subjects which develop students' intellectual capacity and allow them to deal judiciously with technological, economic and cultural change and diversity, equip them with qualities such as initiative, an entrepreneurial attitude and adaptability, and allow them to function with greater confidence in a modern work environment.

56. With this in mind, higher education must develop both responsive and pro-active attitudes towards tl1e labour market and the emergence of new areas and forms of employment. It needs to pay attention to changes in major market trends so as to adapt curricula and the organization of studies to shifting circumstances and thus ensure greater chances of employment for graduates. More importantly, however, higher education must contribute to shaping the labour markets of the future, both by performing its traditional functions and by helping to identify new local and regional needs conducive to sustainable human development. Put succinctly, at the times when the equation 'degree = job' no longer applies, higher education is expected to produce graduates who can be not only job seekers but also successful **entrepreneurs** and **job creators.**

57. In response to these challenges, the active involvement of the academic community with economic partners is increasingly perceived as an integral part of the mission of higher education. These relations still mainly concern research which can contribute to technological development, but there is a growing understanding of the need to expand them to such areas as teaching, training, organization of study and institutional structures. At the same time, new arrangements based on flexibility in programme delivery are being sought to serve as viable mechanisms for the promotion, maintenance and strengthening of stable and mutually beneficial interactions.

58. As organizations in the private and public sectors are increasingly exposed to the effects of worldwide economic and political change, employees who can work efficiently in such settings also require an international context for training, retraining and refresher courses. Higher education institutions, as organizations encompassing many cultures and participating in a wide spectrum of international activities, are well suited to providing a sufficiently dynamic studying and teaching environment with a pronounced international dimension and a global perspective.

59. The process of globalization provides additional evidence that modern development of human- resources implies not only a need for expertise in advanced professionalism but also full awareness of the cultural, environmental and social issues involved. It has become important for higher education institutions to reinforce their role in enhancing ethical and moral values in society and to focus attention on developing an active, participatory civic spirit among

future graduates. Greater emphasis is also needed on the student's personal development alongside preparation for professional life. The demand for such graduates and study programmes could represent an opportunity for the revitalization of humanities and the arts in higher education and open up new opportunities for co-operative links with various economic and public organizations.

Relations with the State and the basis for institutional governance and management

60. Establishing well-organized relations between higher education and the State is a prerequisite for the process of change and development in higher education. It is mainly a responsibility of the State and its institutions to define the overall regulations and broad financial framework in which higher education institutions carry out their mission. Essential in this regard is the legislative function of the State, particularly in view of the institutional, proprietary and functional diversification of higher education.

61. A clear grasp of the principles on which relations between higher education and the State are based is a pre-condition for quality and accountability in governance and management of higher education institutions. **Academic freedom**, understood as a set of individual and collective rights and responsibilities, is central in this respect. Together with the recognition of institutional autonomy, it is essential for the preservation of the university or any other higher education institution as a community of free inquiry. It is these principles which, in many respects, make higher education institutions different from educational institutions at other levels and from research organizations. This should not be interpreted as an imposition of external models and principles but as a general prerequisite for progress in the dissemination of knowledge and the services higher education can offer to a given community and to society as a whole.

62. Recent history has provided strong evidence of the need to defend the principle of academic freedom as a *sine qua non* for the existence and normal functioning of higher education institutions. The proper degree of statutory institutional autonomy should therefore be granted to both **public** and **accredited private higher education institutions** to allow them to be relevant and perform their creative, reflective and critical functions in society. While the State may ensure general co-ordination in various system-wide policy matters such as accreditation and quality assessment, institutional self-governance should be given adequate, pragmatic form. At the same time, the entire socio-economic environment is compelling higher education institutions to build up ties and partnerships with the State and other sectors of society and to accept that they are accountable to society.

63. However the principles of academic freedom and institutional autonomy should not be used as a cover for professional negligence and/or organizational incompetence. they should imply increased responsibility in academic work, including its ethical context, and in matters of funding, self-evaluation of research and teaching, and a constant concern for cost-effectiveness and efficiency. On the other hand, evaluation and quality assessment, particularly of public higher education institutions, should not be made synonymous with external over-regulation or used as a way of restricting public funding. They should function as mechanisms allowing higher education to secure its self-improvement. In this complex policy environment, both the State and higher education institutions should recognize the positive role played by 'buffer organizations' and other institutional forms of collective representation.

64. Analyses of the present conditions of higher education are unanimous in pointing to insufficient financial resources as one of the main constraints on its further development. The challenge of limited resources is unlikely to be overcome in the near future, so higher education institutions will have to find ways of coping with this challenge. Elimination of weaknesses in governance and management is paramount in this process. Therefore it is in the interest of public and private higher education that it should consider the issues of evaluation and quality, including institutional and programme accreditation, as vital for a responsive and accountable system of governance and management.

65. The most viable institutions of higher education, in-both financial and operational terms,

are those which have succeeded in incorporating mechanisms and information systems that enable them to remove mediocrity and guarantee quality of teaching, research and service. These are also the institutions which stand a better chance in competition to obtain resources from the public and private sectors.

66. A key to improved governance and management is confidence in the leadership and managerial qualifications of those involved in these activities. This implies improvements in selection and assessment as well as the enhancement of appropriate training and development provisions at the system, institutional and department levels. It also implies further promotion of research on higher education which should be regarded as an important 'knowledge base' for policy- making.

Funding and cost-sharing responsibilities

67. The major problem facing almost all developed and certainly all developing countries is the basic dilemma that arises from continued high social and individual demand for access to various forms of studies and educational services at a time of growing constraints on public budgets. This situation is nowadays a principal source of strained relations between the State on the one hand and higher education institutions and the academic community on the other. Higher education has to show that it can compete with other organized interests for financial attention from public funding sources. However, the existing and projected difficulties of public budgets should not be the sole context in which the financing of higher education is discussed; it is also timely to discuss these problems from the point of view of shifting the burden for expansion of higher education from public to private sources.

68. Under existing economic conditions, institutions of higher education sometimes have recourse to selective 'cost recovery' regarding their service activities. The adoption of such measures should be accompanied by an earnest search for ways of making more efficient use of their own human and material resources. The introduction of **tuition fees**, for instance, is a sensitive issue in higher education and should, accordingly, be approached with due caution since it touches on many aspects of social justice and mobility, educational equity and the educational, social and fiscal policies of the State in general. It also has to be seen in the context of academic streaming, which is affected by existing tuition fees at the preceding levels of the education system because of its external and internal implications for the student body, governance and public standing. Above all, due attention should be paid to accompanying fees with adequate provision of support for needy students in the form of grants and loans.

69. There is a risk that a radically applied policy of detachment of the State from higher education in matters of funding, influenced by a narrowly interpreted concept of the 'social value' of a given level of education, may result in excessive pressure for 'cost recovery' and calls for 'alternative funding' and 'internal efficiency gains' in teaching, research and administration. Another danger is an excessive demand to 'commercialize' the activities carried out by higher education institutions. In this case observance of standards concerning student admission, study programmes, graduation and teaching may become a matter of general concern and a source of tension between higher education establishments, the State and the public at large. Efforts should therefore be made, through appropriate monitoring and accreditation procedures, to reduce these tensions since all genuine higher education establishments, regardless of their form of 'ownership', are called upon to perform mainly public functions.

70. The main criterion for evaluating the functioning of higher education is the quality of teaching, training, research and service to the community. Therefore, it is important not to confuse the liberalization of economic relations and the need to promote an 'entrepreneurial spirit' with the absence of public social policies, in particular in relation to financing of higher education. Nor should the granting of institutional autonomy be interpreted as a policy alternative to force institutions to raise their own funds - either by excessively contracting out their services to industry or by introducing or raising tuition fees and other study-related charges.

71. Ultimately, if the university or any other higher education institution is expected to make a significant contribution to change and advancement in society, the State and society in general

should perceive higher education less as a burden on the public budget and more as a long-term national investment for enhancing economic competitiveness, cultural development and social cohesion. This is also the framework within which the problem of cost-sharing responsibilities needs to be addressed. In conclusion, **public support to higher education remains essential to ensure its educational, social and institutional mission.**

Renewal of teaching and learning-issues of content and delivery

72. To meet the needs of the agenda for sustainable human development, higher education must adapt its study programmes and, whenever necessary, adopt and develop new ones. The knowledge explosion has resulted in a considerable increase in the number of programmes offered by higher education institutions. One characteristic of this explosion is the interdependence of various scientific disciplines, and there is general consensus on the need to enhance the **interdisciplinary** and **multidisciplinary** content of studies and to increase the effectiveness of methods of delivery. Initiatives aimed at the renewal of learning and teaching must reflect such developments.

73. In order to achieve this aim, higher education institutions should re-evaluate the place of teaching in their overall mission and provide incentives which would better reflect the current importance of this activity. At the same time, they should establish numerous - but not necessarily formalized - links with organizations, trade and industry. They could help to improve conditions of access and ease participation in **new forms of higher education.** While based on traditional studies, these could also encompass advanced programmes of vocational training for those unable to follow the traditional system of admission. For instance, more flexible organization of studies and certification as well as the development of external programmes with the assistance of new communication and information technologies would facilitate access for individuals and communities in rural areas. This would also mean that higher education institutions should make a stronger commitment to the emerging general model of **lifelong learning.** This would call for the establishment of new types of relations between higher education institutions and their social partners. It would also imply a continuous analysis of the need for study programmes, training and retraining, and would require the establishment of methods for adequate recognition of work experience relevant to students' academic work and to instructors' teaching qualifications.

74. New roles for higher education will need to be defined to provide lifelong learning opportunities at the highest level. Less formal and more flexible methods of advanced training and updating knowledge and skills must be found. Flexible organizational structures for teaching should not only be in harmony with the existing subtle links between knowledge-generating activities and teaching but should make it easier for specialists from economic and other sectors to teach in higher education institutions. Experienced people from the world of business, government and international organizations could thus inject new idea-s into study programmes.

75. The effectiveness of the renewal of learning and teaching also depends on how knowledge is transmitted. It is increasingly evident that under the combined impact of software and hardware development in information and communication technology, avenues have now been opened up to facilitate new types of educational service. This technology-based learning environment calls for rethinking teaching practices as well as the overall functions of campus-wide information systems. In order to be favourably accepted by the academic community, in particular by students and teachers, and to be fully beneficial to learning and teaching, the use of information technology should be judiciously placed on the institutional agendas of commitment aimed at improving learning, teaching and information services, particularly libraries. Further development of these technologies in higher education also depends on finding satisfactory solutions to reconcile the academic community's need for access to information and the interests of the owners of intellectual property rights, especially those involved in commercial publishing and information exchanges.

76. Higher education institutions should make greater use of the advantages offered by the advancement of communication technologies. It is now possible, for example, to integrate distance learning into more traditional study programmes

without loss of quality. As a result of such developments, the distinction between distance and traditional education is becoming blurred. Alternative delivery systems are an increasingly viable element in a forward-looking blueprint for higher education, especially in opening up to a new clientele and creating flexible strategies in order to overcome the disadvantages associated with the traditional organization of studies. Co-operation with both public and private organizations and associations should be fostered in this respect.

77. In this search for new solutions, institutions in many countries have been looking for alternatives to traditional study programmes through the development of **knowledge modules.** The introduction of modular curricula as organizational frameworks for studying and teaching warrants further exploration and encouragement. It requires improvement of the system of study counselling, appropriate adjustments concerning the course ownership and term-structured formats used by many faculties, redesigned student support and tutoring services (especially in distance higher education) and opportunities for study credit and staff transfers between various forms and fields of study.

78. The system of mutual national and international recognition of studies, diplomas and degrees should reflect and facilitate this flexible system and stimulate vocational counselling and the upgrading of professional qualifications. At the same time, it seems evident that the adoption of modular systems could facilitate the international recognition of studies and diplomas, thus favouring academic flexibility and increased mobility. The need for international agreements, co-operation mechanisms and practices in this field seems both justified and indispensable.

Strengthening the research function of higher education

79. No system of higher education can fulfil its mission and be a viable partner for society in general unless some of its teaching staff and organizational entities - in accordance with their particular institutional goals, academic potential and material resources - also carry out research. This statement needs to be reiterated particularly now that higher education, in common with other research organizations, needs renewed public support. Society must restore the scientific 'faith' of researchers to enable them to pursue new goals in the light of the complex ecological, economic, social and cultural issues facing humanity.

80. The research function of higher education has also become characterized by the diversification of those engaged in leading-edge scholarly work. Higher education institutions, particularly in the developed countries, face strong competition from research institutions outside the academic community which, in many fields, possess better equipment and more resources. On the other hand, the public funds allocated for research in academic institutions are being subjected to greater administrative restrictions. Under such conditions, higher education institutions and researchers themselves have to show their capacity to compete with other research organizations and adapt to new approaches to funding and to devise new organizational forms of co-operation in research.

81. Emphasis on short-term gains and the pressure of budgetary constraints can lead to serious long-term consequences for higher education institutions as the proper seats for the advancement of knowledge and the training of future scientists and industrial researchers. Research departments in higher education institutions, although costly, are a crucial source of skills and ideas in the context of the global economy based on knowledge and constant technological change. The best way to make the general public, government bodies and economic organizations aware of the role of research in higher education is to demonstrate, through convincing results, the scholarly quality, economic value, humanistic perspective and cultural relevance of research and the related study programmes and teaching.

82. Because of the costs involved, many countries, particularly those facing serious economic difficulties, have tended to resort to cuts in funding research in higher education, even though they are sometimes the main, and in many developing countries the only, places where significant research activities take place and where technology suited to local needs can be developed. Meaningful rationalization of research efforts should incite many countries and institutions, particularly in developing States, to effectively co-ordinate their sometimes

over-fragmented research programmes and establish **linkages** and/or **networks** of centres where meaningful research can be carried out.

83. The educational benefits of activities associated with research are often underestimated, partly because the links between teaching and research are not always straightforward or tangible. It is important that research in higher education institutions be undertaken not only for reasons of scholarly prestige or for economic considerations but also as part of the overall renewal and development of learning, teaching and public service activities, including the dissemination of knowledge. Researchers should therefore also look at how their findings can be included in curricula and retraining programmes. Besides its educational value, participation in scientific projects teaches students how to work as part of a team and to accept the discipline inherent in any scientific pursuit.

84. Science is continuously confronted with new issues requiring knowledge from several fields and therefore the interdisciplinary training of researchers. The number of areas of common concern, subtle links and joint explorations between science, technology and culture is rapidly increasing. Higher education institutions and other innovative organizational settings, such as science parks or technology incubators, provide a suitable environment to embark on such experiments.

Responsibility of higher education towards other education levels

85. Any forward-looking vision of education and any adequate education policy must consider the education system as a whole. Accordingly, any reform of higher education must take into account its close interdependence with all the other levels of education.

86. This indispensable coherence of the educational system stems from the fact that higher education both depends on the results of the work done by prior levels of education and is responsible for the training of teachers for primary and secondary education. Moreover, research and innovation, including the development of new educational methods and teaching and learning materials, are often conceptualized, developed and tested by those working in higher education institutions before being applied in the system as a whole. **Higher education needs to assume a leading role in the renovation of the entire education system.**

87. The other persuasive argument for greater links between higher education and schools is that teaching at primary and secondary level and in technical and vocational schools increasingly demands the qualities and skills of university-level training, particularly in developing students' capacity for autonomous learning and critical thinking. Full command of the discipline being taught also calls for periods of in-service training. By playing such a role in the professional development of teachers, higher education can contribute to the improvement of the status of the teaching profession.

88. Higher education should assume a greater role - together with the preceding levels of education and in co-operation with scientific organizations and the mass media - in bringing science more into education and culture. One way would be to develop 'science-friendly' curricula and activities to enhance functional technological literacy and encourage more young people, especially women, to pursue studies in natural science, technology and engineering.

Quality of higher education

89. The demand for increased relevance in higher education should go hand in hand with the general concern for enhanced **quality.** Quality in higher education is a multidimensional concept which depends to a large extent on the contextual setting of a given system, institutional mission, or conditions and standards within a given discipline. For several years now, the policy debate in higher education has been dominated by concern for quality. There is every reason to believe that this will continue in future, given its implications for the development and reform of higher education. Quality embraces all its main functions and activities: quality of teaching, training and research, which means the quality of its **staff** and **programmes**, and quality of **learning** as a corollary of teaching and research. However, it should be accepted that the search for 'quality' has many facets and goes beyond a narrow interpretation of the academic role of different programmes. It therefore also implies attention to questions pertaining to the quality of **students** and

of **the infrastructure and academic environment.** All these quality-related issues, together with adequate concern for good governance and management, play an important role in how a particular institution functions, how it is assessed and what 'institutional image' it can project to the academic community and society at large. Finally, it is essential to indicate that the principal objective of 'quality assessment' is to achieve institutional as well as system-wide improvement.

Quality of staff and programmes

90. Many higher education establishments, primarily universities and other university-level institutions, enjoy a deserved prestige on the national and international scene. This status is assured principally by the academic eminence of their past and present teachers and researchers. It represents an important factor in the intellectual and moral authority of academe and for the preservation and promulgation of institutional culture and academic standing. It is, however, improper for higher education to take such recognition for granted, especially now that governments, politicians, representatives of the economic sector and the public are insisting on evaluation, quality assessment and the accountability of all kinds of public institution, including higher education establishments.

91. The evaluation and quality assessment process should start with and actively involve the teaching and research staff, given their central role in the diverse activities of higher education institutions. Participation of others, including students in matters related to evaluation of teaching, should be organized with appropriate recognition of the stakeholders' role with regard to the area of evaluation and assessment.

92. It is essential that policies as well as practices concerning the academic staff should adhere to unambiguous academic objectives and clear ethical criteria, especially with regard to recruitment and promotion. The decisions should be based on a recognition of predispositions for teaching and research. Those responsible for such decisions should take into account the conclusions of evaluation and quality assessment and provide for various forms of in-service training and professional development schemes, including pedagogical training. The recognition of assessment and evaluation, which may take such forms as self-evaluation, peer evaluation or external evaluation, should be perceived as an essential mechanism in the overall policy of staff development in higher education. Success or failure in academic work should not, however, be used to justify a short-term outlook and interests.

93. For a variety of reasons, the issue of quality assessment of higher education has attracted much attention and is now firmly on the policy agenda of higher education, even if the techniques still need to be improved. This caution is particularly relevant with regard to 'quality' and 'productivity' indicators as evaluation approaches often overlook the intrinsic differences between disciplines or groups of disciplines.

94. The analysis of the quality of academic staff, which should be one of the prerequisites for the renewal of teaching and research, involves the following main issues:

- The proper **distribution of the resources and tasks** constituting the work-load of academic staff, i.e. teaching, tutoring, research, participation in institutional governance, management and administration, as well as community service.

- The appropriate financial and non-monetary **recognition** to be given to the above activities.

- The **recruitment and staff development policies, strategies and practices** which are integral parts of national and/or institutional policies for higher education and the concern of teachers and their associations to acquire tenure and job security. This brings to the fore the issues of contractual arrangements for the employment of academic staffs including tenure and the procedures for granting it, promotion, retirement and positions of emeritus professor.

95. The solutions needed to enhance the quality of higher education can be found in measures covering not only financial issues but also respect for the principles of academic freedom and institutional autonomy. However these fundamental principles should not be invoked in order to militate against necessary changes or as a cover for narrow-minded

corporatist attitudes and abuse of privileges which may, in the long run, have a negative effect on all aspects of the functioning of the higher education system and its institutions.

Quality of students

96. Participation in higher education is no longer merely a reflection of the social and economic relationships in a given society. It has become a determining factor in such relationships and influences the overall development of society. Consequently, higher education can play an important role in ensuring upward social as we]l as horizontal professional mobility. Equity calls for greater opportunities for members of lower status groups to participate in quality education programmes. The creation of possibilities, particularly for young people, to pursue higher education studies is important for a variety of educational, social and economic reasons. But the creation of such possibilities is linked, particularly when public funding is involved, to investment by society as a whole, and in many countries studying is not a common right for all those who are academically eligible.

97. There is every justification for considering students as a great asset to society. However, with the advent of mass higher education, it is necessary to engage in a serious debate on a number of basic issues concerning access to higher education. Thus, increasingly pertinent will be such policy questions as:

- What mechanisms would enable societies to afford mass higher education in order to observe the principle of social equity?

- How can quality be maintained in a mass higher education system?

98. There are no ready answers, and States and higher education institutions have adopted varying solutions. There is general agreement, however, that the quality of students in higher education depends in the first place on the aptitudes and motivations of those leaving secondary education and wishing to pursue studies at the higher level - hence the need for a re-examination of the interface between higher and secondary education.

99. When faced with the problem of accommodating greater numbers and categories of student, an obvious solution adopted by both policy-makers and institutions is to diversify programmes and qualifications and to establish a series of entry and exit points within the continuum of higher education. The existence of solid graduate, postgraduate and staff and professional development study programmes is emerging as one way to raise the overall quality of the student population in a given institution.

100. Concern for the quality of students should also include action taken at the institutional level to provide student counselling and orientation, including the specific problems of international students. This is relevant from the point of view of institutional academic effectiveness and also affects public funding to higher education.

101. Public interest in quality assurance related to students also stems from the fact that modern societies need highly educated and motivated people who can perform appropriate functions in public and private organizations. Societies therefore need suitable higher education systems and should be ready to give qualified students appropriate incentives. At the same time, it is important to foster among students, particularly those benefiting from public support, an awareness of their civic responsibility.

Quality of infrastructure and academic environment

102. One of the barriers to enhancing the quality of teaching and research is the state of what may be broadly described as the 'physical academic environment' of higher education institutions, which covers everything from access roads to computerized networking and data-processing facilities. The quality of this environment is also important in the context of institutional culture, which attaches importance to institutional identity, or keeping together an academically and socially diversified network of buildings and/or campuses.

103. This matter is particularly pertinent in the context of UNESCO's projections showing that participation in higher education by the 18-23 age-group is set to increase. By the year 2025 it will be necessary to provide adequate places for an additional 35 million students. These figures do not include other categories of student

(part-timers, for example) whose numbers are rapidly growing in almost all countries.

104. Capital investment aimed at modernizing and improving the infrastructure of higher education should be seen by both public and private local, regional and national organizations as 'public works' forming an integral and important part of overall efforts towards modernization of the economy-related infrastructure. No less important in this respect is the fact that some facilities of higher education institutions are often used for civic, cultural and sporting events by both the academic community and the general public.

105. One area which should receive particular attention is libraries. The term 'library' has taken on a new meaning in modern academic institutions. It is no longer just a place where books and other printed material relevant to teaching and research are regularly collected, catalogued and preserved. It is increasingly a nerve centre for the interaction between information providers and users on which modern learning, teaching and research greatly depends. Along with archives and museums, libraries provide not only a physical location but also an intellectual context for the storage, preservation and exchange of knowledge.

106. Advocating the modernization of the infrastructure in higher education institutions should not be interpreted as a dismissal of the importance of preserving the institutional and academic heritage, including physical possessions and collections which in many cases represent a part of the national and universal cultural and architectural heritage.

lnternationalization of higher education

107. The growing internationalization of higher education is first and foremost a reflection of the global character of learning and research. This universal context is being reinforced by the current processes of economic and political integration, the growing need for intercultural understanding and the global nature of modern communications, consumer markets, etc. The ever-expanding number of students, teachers and researchers who study, teach, undertake research, live and communicate in an international context attests to this overall welcome development.

108. In addition to the increased mobility of individuals, we are witnessing an intensification of transnational research links and considerable expansion in various types of networking and other linking arrangements among institutions, academics and students. The steady advance of information and communication technologies facilitates this process. There are, however, serious problems posed by some misdirections of international academic relations. The transfer of knowledge and access to data bases are severely affected by various adverse factors, not always related to educational matters; for instance, high-level training and research capabilities are unevenly distributed geographically. Since knowledge is universal, its pursuit, advancement and dissemination can only be achieved through the collective efforts of the international academic community-hence the inherent international dimension of academic life and of institutions, scientific societies and student organizations. International co-operation is a goal shared by the world academic community; moreover it is a sine qua non for assuring quality and efficiency in the functioning of institutions of higher education. Higher education has acquired a fundamental role in the development, transfer and sharing of knowledge, and international academic cooperation should bring its contribution to the total development of human potential. This will help to narrow the gaps between nations and between regions in the fields of science and technology and to improve understanding between individuals and between peoples so as to promote the culture of peace.

Principles and forms of international co-operation

109. International co-operation should be based on genuine partnership, mutual trust and solidarity. It should make use of flexible procedures which allow the participating institutions and/or individuals to address problems responsively, and should be aimed at enhancing national, regional and local capacities for the development of human resources. Yet in recent times, the flow of intellectual manpower, which is particularly important for any long -term development strategy, has tended to go in one direction from South to North. Renewed inter-university co-operation, particularly with the developing countries, should not only entail a rapid transfer of knowledge and technology but should also

promote incentives to **retain** students, academic staff and researchers in their local institutions. This is why international agencies, intergovernmental and non-governmental organizations, the national authorities in charge of higher education and the institutions themselves are becoming increasingly aware of the advantages of an international academic relations strategy which will contribute to the rehabilitation of higher education in the developing countries and diminish the phenomenon of external brain drain. The importance of South-South partnerships, moreover, should not be played down - higher education institutions often have more to share of operational value when they can compare similar sets of experiences.

110. It is vital that participation in international academic mobility should not be restricted to an instrument of regionalization or be determined by a mercantile approach to the selection of foreign students or to enhancing the supposed prestige of a particular establishment. There should also be ample room for innovative forms of 'learning from abroad' directed at countries and higher education institutions in great need of international assistance.

111. **The most pressing need for international co-operation in higher education is to reverse the process of decline of institutions in the developing countries, particularly in the least developed.** The adverse conditions in which higher education has to function call, first of all, for appropriate measures and efforts by the respective States and institutions. They must learn to be more effective and efficient in strengthening their links with society so as to play a full part in the development efforts of their region or community. It is not unusual to perceive the university-level establishment as part of the institutional machinery of the State instead of seeing it as an essential part of a local community and of society in general. It is essential to persuade the decision-makers and all of society that the latter is the case.

112. Beset as they are with serious socio-economic and political problems, many developing countries will not find it easy to divert significant resources towards higher education. It is therefore up to the international academic community and international organizations to assist higher education in those countries which are facing particular difficulties in developing their education systems and their scientific and technological capabilities.

113. Searching for solutions aimed at greater relevance, quality and internationalization in higher education requires a renewed convergence of thinking about the centrality of human resources development and of the role played by all levels and forms of education. In that respect, it is crucial that the international and national development funding agencies, non-governmental organizations and foundations and the academic community at large should see support to higher education institutions in developing countries as essential for the overall development of the education system as well as for the enhancement of endogenous capacity-building.

114. There is also growing awareness of the need to better co-ordinate international co-operation for development in higher education. Since international aid programmes are very often complementary, they can be consolidated and expanded through well-designed and coherently implemented co-operation. The advantages are obvious: the pooling of resources, particularly when they are as hard to come by as now; avoidance of overlapping and duplication; better identification of projects and increased assurance of their validity through collective agreement and review. More importantly, a multilateral framework of co-operation offers the beneficiaries a wider choice of inputs for particular projects and reduces the danger of dependence on imported models of higher education development.

115. The policy of seeking specific solutions stems from a sense of the distinctiveness of many regional, national and local problems. It also relates to the understanding that while knowledge is universal, its application is usually local. Higher education depends on and has a responsibility to its local community. This local presence is an integral part of the service mission of the university or any other higher education institution. But while developing local relevance, institutions should also consolidate their international presence by positively seeking solutions to various scientific, educational and cultural problems which are relevant to society in general.

116. Concern for quality also extends to international programmes and exchanges. It should be reiterated that promotion of teaching and research through international academic co-operation should avoid 'one-way traffic', particularly in the long run. Higher education institutions should assume greater responsibility and show restraint in inter-institutional arrangements for 'franchising' teaching and granting degrees because, if not subject to internal and external quality assessment, this can easily jeopardize the academic standing of the institution.

117. Any far-sighted approach to international co-operation in higher education should also seek a correction to the problem of long-term external brain drain. Broader international intellectual exchanges should stimulate an overall improvement in the flexibility, range and quality of higher education and help to remedy some of the causes of external brain drain. Steps that might be taken include arrangements whereby students follow part of their courses at a foreign institution, inducements by the sending countries to their nationals to return home on completing their studies, increased research and library facilities and easier access to scientific data bases for institutions of higher education, particularly those in the developing countries and in Central and Eastern Europe. Also necessary are adequate fincancial and personnel policies for the reinsertion of university teachers and researchers in their country of origin, even if only for temporary periods. The search for new modalities for the rapid transfer of knowledge through tailor-made programmes is another example of innovative and well-managed international co-operation that can help to alleviate external brain drain.

Access to knowledge

118. The quality gap between academic institutions in different parts of the world is a direct reflection of the wider economic and social imbalances existing between developed and developing countries. The serious socio-economic situation in many developing countries, particularly the LDCs, has had inevitable repercussions on their higher education systems. Yet in today's knowledge-intensive world, sound higher education systems are central to any prospects for a reversal of the trend. The question, then, is how disadvantaged education systems can escape from the vicious circle in which they find themselves.

119. One of the essential first steps - for which the countries and universities concerned must assume primary responsibility - is institutional reform, and particularly adaptation to specific needs. At the same time, international co-operation for institutional development has a vital role to play in ensuring access to and in facilitating the transfer of knowledge. By virtue of their vocation, higher education institutions should be ready to assume a leading role in ensuring the universal dissemination of knowledge and in promoting the development of their fellow institutions worldwide. The challenge is to see that, in a world where rewards and opportunities are unequally distributed, mechanisms are put into place to share knowledge through easier access to recent findings, appropriate academic mobility and increased technical co-operation among regional groupings.

120. Access to knowledge has an additional dimension for higher education in those developing countries which lack resources for development of their own institutions and programmes of advanced studies and research. It is through the development of local skills and competence, through increased numbers of providers and users of knowledge, that they can help bridge the gap separating them from the developed countries and thus reduce their dependence on external technical and scientific assistance. In this endeavour, increased participation in various forms of international academic co-operation would provide protection against long-term external brain drain. Projects such as multi-campus international higher education institutions are particularly worthy of further exploration.

121. In the academic world, as in many other spheres of human activity, the promotion of academic competition, while indispensable for the advancement of knowledge, should not preclude seeing many aspects of access to scholarly discoveries from the point of view Of the ideals of academic solidarity. Members of the world's academic community should be concerned not only about the quality of their own individual institutional setting, but also about the quality of higher education and research everywhere.

Networking for academic excellence

122. While it is imperative for each institution of higher education to aspire towards excellence, none of them can ever hope to attain the highest standards in every field. This is why inter-university co-operation is becoming increasingly important to avoid the marginalization of certain institutions, particularly in the developing countries, and to make academic excellence more readily available through a 'division of tasks' among universities that transcends national frontiers. An interlocking system of international postgraduate and research centres can provide an important boost to higher education within a given region and can help to promote South-South co-operation, especially when such arrangements are based on common interests and adequately shared financial responsibilities.

123. Modern technological advances make the creation and functioning of such centres look particularly promising. They allow the expansion of the concept of academic mobility so as to include not only the traditional mobility of students, teachers and researchers, but also a sort of mobility in reverse, placing researchers from centres of excellence at the disposal of students, teachers and researchers of institutions in distant and disadvantaged places. This can be done through electronic networks, videocassettes, CD-ROMs and other modern forms of communication. These new technologies should also make it possible to tackle the problem of dissemination of research findings by researchers working in higher education institutions in the developing countries.

V. Change and developpement in higher education - the role of UNESCO

124. The development of higher education and the promotion of research through international co-operation have been major fields of action for UNESCO since its foundation in 1946. As the specialized United Nations agency for education, science, culture and communication, UNESCO had its origins in the spirit of solidarity prevailing within the intellectual and scientific communities at the end of the Second World War. Various higher education institutions, particularly the universities, played a leading role in building up that co-operative effort. In a certain sense, therefore, they can all be considered the Alma Mater of UNESCO. Moreover, through their functions in teaching, training, research and service to the community, higher education institutions cover the very areas which fall within the competence of UNESCO and are therefore among its major partners in action.

125. The achievement of **basic education for all**, reiterated during the Jomtien Conference, is UNESCO's priority in the field of education. It goes hand in hand with concern for the renewal and advancement of education **at all levels** and with the need to reform the education system as a whole. In this respect, higher education plays an important role because it is the enhancement of its relevance and quality that creates the conditions for progress in education at all other levels. Not only is higher education responsible for the training of teachers and other education personnel, but its mission also includes educational research - as the basis for policy and decision-making in this field - as well as curriculum reform and the development of teaching methods and materials. Recognition of the connection between higher education and the other levels of education, its links with the development of science and technology and awareness of its role as a key element for sustainable human development have led UNESCO to make **higher education a priority area** in its programme.

126. One of the focal points of UNESCO's role for the further development of higher education has been the Organization's sustained contribution to the creation and strengthening of higher education institutions in the developing countries. This task is particularly urgent today and it is in line with UNESCO's mission, repeatedly reinforced by the governing bodies of the Organization, to direct its efforts first and foremost towards the developing countries in order to assist them to overcome the knowledge gap separating them from developed nations and to enhance their capacity for active participation in the development of higher education and science.

127. The analysis of issues and challenges facing higher education and the international experience acquired by UNESCO in this field enable the following guidelines for its future work to be identified:

- broadening access and participation in higher education;

- enhanced investment in education, including higher education, through worldwide mobilization of all stakeholders so as to secure a broader funding base;

- improving the relevance of higher education by responding to the challenges of a changing world at international, regional, national and community levels;

- enhancing the quality of higher education in all its functions and with regard to all those participating in its activities;

- promoting the role of research in higher education;

- furtherance of academic freedom and institutional autonomy;

- expanding international co-operation in higher education and giving a sense of direction to that co-operation in a spirit of academic solidarity.

Broadening of access and participation

128. The Convention against Discrimination in Education, adopted by UNESCO in 1960, urges the States party to it 'to make primary education free and compulsory; make secondary education in its different forms generally available and accessible to all; make higher education equally accessible to all on the basis of individual capacity'. The Convention on the Rights of the Child, adopted by the United Nations in 1989, also emphasized that 'higher education should be made, by every appropriate means, accessible to all, on the basis of capacity'. In keeping with these internationally agreed principles and given the disparities of access to higher education, UNESCO will continue to promote broader access in its agenda and activities on development and change in higher education.

129. The principles of broadening participation in higher education and ensuring equity of access have been regularly endorsed by the General Conferences of UNESCO and by the International Conferences on Education and the regional conferences of ministers of education convened under its auspices. This policy has also received support at various other meetings organized by UNESCO with its partners in higher education. It has been reinforced by analyses and studies, particularly on the situation in the developing countries and on women's participation in higher education. The pressure for increased access is a major challenge for many countries and regions, particularly those where it is difficult to secure the necessary inputs in terms of personnel, finance and logistics. UNESCO will, accordingly, pay due attention to this problem.

Searching for a wider resource basis

130. In UNESCO's opinion, the central issue of matching increasing demands on and expectations from higher education with the scarcity of resources requires mobilization of all actors and stakeholders in order to raise investment in higher education. The Organization also stresses the need to:

- recognize higher education as an important social investment and therefore make adequate allocations for it from public funds;

- engage in an earnest search for new approaches to funding, based on participation by all those who either directly or indirectly derive benefit from higher education, including the economic sector, local communities, parents, students and the international community.

131. Broadening the resource basis should also be accompanied by systematic efforts by the higher education institutions themselves to increase their cost-effectiveness and efficiency. UNESCO will therefore continue, in close co-operation with other international organizations and with the higher education community as a whole, to urge extended public support for higher education. At the same time the Organization will follow national and institutional experiences on various cost-sharing and student support schemes and cost recovery policies, and will examine their long-term implications on access, equity of participation and sustainable institutional financing.

Fostering relevance and quality

132. UNESCO notes that concurrent trends and global challenges make it necessary to rethink and reform higher education and its institutions in practically all countries and regions. Quantitative growth is far from uniform at the world level. But the significant growth in both the numbers of students and of institutions calls for adequate responses to what is sometimes termed the 'massification' of higher education. Greater numbers require co-ordinated policies, structures and programmes, which are the basic ingredients of any educational reform. The same is true of the increasingly diverse demands that society places upon higher education, covering the economic, social, cultural and scientific fields. Profound changes in the advancement, production, dissemination and application of knowledge, of which higher education is an integral part, also call for renewal and reform. The unprecedented rate of expansion of scientific activities requires the updating of curricula and programmes, greater flexibility of organizational structures and a better understanding of the economic and ethical aspects Of scientific activities. Progress in the educational

sciences and a better understanding of learning processes are also conducive to change and innovation in higher education.

133. UNESCO will follow these developments attentively and will continue to contribute to the reform and development of higher education. However, it does not intend to formulate ready-made plans or impose specific models for the development and functioning of higher education This is the prerogative of each country and its government, working inconcertation with all stakeholders, the institutions of higher education and the academic community, including students.

134. One of UNESCO's main roles in the collective effort to promote change and development in higher education is to facilitate the **exchange of information and experience and to promote research on higher education** which is relevant to policy and decision making. By serving as a kind of clearing house, UNESCO can respond to the prerequisites for informed decision-making by supplying data and analyses and by monitoring changes and trends in higher education. The Organization will, accordingly, further its work in co-operation with its traditional partners for the development of viable higher education and scientific statistics and indicators, including the refinement of the International Standard Classification of Education (ISCED). Furthermore, through its biennial *World Education Report and World Science Report*, it will monitor developments in the field of higher education and science while identifying the emerging challenges, including those of facilitating access to and the transfer of knowledge.

135. UNESCO will continue to act in favour of preserving and enhancing **diversity** among higl1er education institutions and systems, which it regards as an important asset of academic life in general and as a prerequisite for the advancement of knowledge and the preservation of national and local cultural identities. This policy is reinforced by experience, which has demonstrated how damaging it is for the academic and intellectual development of a country to uncritically adopt foreign models for its own higher education. History has shown that the most viable systems of higher education are those which exhibit the right balance between unity and diversity, a reflection of the **universality** of knowledge and the specificity of social, economic and cultural needs.

136. In its commitment to the need for **diversity, relevance** and **quality** in higher education, UNESCO has continuously decentralized its programmes in the field to its Regional Offices and centres such as the European Centre for Higher Education (CEPES) and the Regional Centre for Higher Education in Latin America and the Caribbean (CRESALC). This policy will be continued. UNESCO will also emphasize technical and intellectual support to governments and to the 'bodies in charge of higher education, as well as activities aimed directly at improving governance and management and enhancing quality, While stressing the need for systemic, national and international development of higher education, UNESCO will also give due attention to institutional development. Recognizing the importance of co-operation between higher education and its economic partners, UNESCO will promote such activity, especially in the context of its UNISPAR (University-IndustryScience Partnership) programme.

137. One of the principles on which UNESCO is founding its relations with all its partners involved in higher education is respect for **academic freedom** and **institutional autonomy**. This derives from experience and from the conviction that adherence to these two principles is a prerequisite for the normal functioning of higher education institutions and for the success of reform. In response to an appeal by the academic community, UNESCO will continue to support the development of internationally accepted principles and practices concerning academic freedom and the autonomy of higher education institutions, and the enhancement of the **status of higher education teachers**, in conformity with standards adopted worldwide.

Expansion of international co-operation

138. In keeping with its constitutional mission 'to maintain, increase and diffuse knowledge... by encouraging... the international exchange of persons active in the field of education, science and culture, UNESCO will continue to give priority to activities aimed at promoting worldwide, regional and interregional

co-operation in the field of higher education. Its principal partners in the implementation of this objective are and will continue to be the Member States, other international government organizations, higher education institutions and non-governmental organizations (NGOs).

139. The analysis of the internationalization of higher education made earlier in this policy paper identified major trends and developments which, in conjunction with ongoing social, economic and cultural challenges, have also affected the level and forms of international academic co-operation. There is a clear need for more international co-operation in the field of higher education. UNESCO's response has taken the form of a set of organizational measures and a search for new approaches and activities spread over all its programmes in the fields of education, science, culture and communication.

140. UNESCO will continue to extend its support to and co-operate closely with those NGOs which play an active role in promoting regional and international co-operation in the fields of education, science, culture and communication. A large majority of these NGOs are academic, scientific and professional associations. In 1988, UNESCO established a Collective Consultation of Non-Governmental Organizations specializing in higher education to assist the Organization in the orientation of its higher education programme and to participate in its execution. Recognizing the role of non-governmental organizations in promoting a spirit of co-operation, UNESCO plans to further enhance this partnership.

141. UNESCO is concerned that the deterioration of general conditions for education and research and thus the decline of higher education institutions in some countries is widening the gap between industrialized and developing countries with regard to their capacity to absorb and develop modern technology and new knowledge. The persistence of such imbalances impairs their capacity to cope with present and future global challenges. Therefore, more than ever, efforts are needed to assist those members of the academic community for whom international co-operation and assistance can correct or reverse this situation. The Organization will set up priorities in its programmes in view of the above objectives.

142. The new conditions and expectations concerning international co-operation require new and more effective approaches. It was with this in mind that UNESCO took a decision at the twenty-sixth session of the General Conference in 1991 to launch the **UNITWIN/UNESCO chairs programme** as its intersectoral plan of action. The programme aims to strengthen academic co-operation with particular emphasis on support to higher education institutions in the developing countries and in Central and Eastern Europe.

143. The programme is designed to develop **network linkages** among higher education institutions at the interregional, regional and subregional levels, with the aim of promoting **institutional development, sharing of resources and facilitating the exchange of expertise and experience as well as of staff and students**. It is based on the spirit of academic solidarity needed to set in motion a process leading to strong and durable links between higher education and scientific institutions worldwide. From the academic point of view, the programme is intended to promote and reinforce innovative and interdisciplinary teaching, training and research programmes in fields which have a direct bearing on sustainable human development, such as population issues, the environment, science and technology, conflict resolution, peace, human rights and democracy. In this context, the programme will take into account a recent initiative of the Organization called 'Management of Social Transformations' (MOST) which is aimed at promoting international comparative policy-relevant social research.

144. The UNITW1N/UNESCO chairs programme encompasses a wide range of activities which require flexible modes of action. Two types of closely associated and interdependent activities have emerged as the major means of implementation: **networks** and **UNESCO chairs.** A long-term objective is that co-operation between the UNESCO chairs will lead to the creation of networks linking **centres for advanced studies and research** in particular fields, serving to train highly qualified specialists at the national, subregional and institutional levels.

145. The programme has been initiated in full awareness of the fact that it requires considerable resources as well as an adequate monitoring and review system. UNESCO will continue to seek organizational and financial support for the programme, in close co-operation with governments, intergovernmental organizations, donor agencies, the public and private sectors and higher education institutions. The Organization will also pay close attention to other innovative, cost-efficient forms of implementation of all its activities related to international academic co-operation. In this context, the possibility of setting up a **University Volunteers Scheme**, following the model of the United Nations Volunteers Programme, will be pursued.

146. UNESCO has a long-standing commitment to the development and promotion of international co-operation in higher education through **the recognition of studies and qualifications.** The five regional conventions on the recognition of studies, diplomas and degrees in higher education adopted under the auspices of UNESCO over the last two decades attest to this commitment: Latin America and tl1c Caribbean (1974), the Arab States (1978), the Europe Region (1979), the African States (1981) and Asia and the Pacific (1983). An International Convention on the Recognition of Studies, Diplomas and Degrees in Higher Education in the Arab and European States bordering the Mediterranean was adopted in 1976. An International Recommendation on the Recognition of Studies and Qualifications in Higher Education was adopted by the General Conference of UNESCO at its twenty-seventh session, in 1993. Thus a global framework has been created that can also serve to deal with academic co-operation. The ongoing processes of economic, cultural and political integration will be taken into account in the activities geared towards implementation of these conventions.

147. The practical significance of these standard-setting instruments depends on the effective activities carried out by the Regional Committees and national bodies entrusted with the task of following up and facilitating the application of their provisions. Consequently, UNESCO will continue to support the activities of those bodies and to promote various forms of student and staff mobility through evaluation of study programmes and degrees, development of data bases, assistance in building up national accreditation mechanisms and publications such as *Study Abroad* and the *World Guide to Higher Education.*

VI. Towards a renewal of higher education - the 'pro-active university' and the 'new academic covenant'

148. Advocated in this policy paper is a vision of higher education which, while recognizing it as one of the most important components of contemporary and future society, also calls for a renewal of its teaching, learning, research and service functions and ultimately of the institutions of higher education themselves. At the same time the complexity, interdependence and pertinence of many global, regional, national and local issues is such that dealing with them only reactively risks marginalization of the institutions which adopt such a stand, particularly in the long term. UNESCO, being committed to the idea of renewal of higher education, considers it essential that all forward-looking systems and institutions of higher education should build up their own mission with this broad vision in mind, which can best be described as that of a **'pro-active university'.**

149. This vision of a 'pro-active university' will also guide UNESCO in the development and implementation of its activities in the field of higher education. The goal of the action in which all stakeholders need to participate is to turn every institution of higher education into:

a place for high-quality training, enabling students to act efficiently and effectively in a broad range of civic and professional functions and activities, including the most diverse, up-to-date and specialized;

- a place to which access is possible primarily on the basis of intellectual merit and of the ability to participate actively in its programmes, with due attention to ensuring social equity;

- a community fully engaged in the search, creation and dissemination of knowledge, in the advancement of science, and participating in the development of technological innovations and inventions;

- a place of learning founded on quality and knowledge alone, which inculcates, particularly in the minds of its future graduates, commitment to the pursuit of knowledge and a sense of responsibility to place training at the service of social development;

- a place that welcomes return for updating and enhancement of knowledge and qualifications as part of institutional practice and culture;

- a community in which co-operation with industry and the service sectors for the economic progress of the region and nation is encouraged and actively supported;

- a place in which important local, regional, national and international issues and solutions are identified, debated and addressed in a spirit of learned criticism, and where the active participation of citizens in the debates on social, cultural and intellectual progress is encouraged;

- a place to which governments and other public institutions can go for scientific and reliable information which is increasingly being required for decision-making at all levels, and which also promotes public participation in the decision-making process;

- a community whose members, being fully committed to the principles of academic freedom, are engaged in the pursuit of truth, defence and promotion of human rights, democracy, social justice and tolerance in their own communities and throughout the world, and participate in instruction for genuine participatory citizenship and in building a culture of peace;

- an institution well situated in the world context, with all its accompanying threats and possibilities, and adapted to the rhythm of contemporary life, the distinctive features of each region, and of each country.

150. This broad vision of the 'pro-active university' implies its creative adaptation in the process of searching for specific institutional models and practices which meet the needs, conditions and possibilities of particular higher education institutions, communities, countries and regions. Such a search for the development and change of higher education should also be seen as an essential part of the broad process of changes in contemporary society. Responsibility for the actual form and measures of implementation of the renewed higher education system belongs to every country and to its academic community - yet in a fast changing world, no country can consider itself isolated from the influences of international events and developments.

151. UNESCO anticipates, as a concluding objective of the whole process of change and development in higher education elaborated in this document, the emergence of a new **'academic covenant'** that will place higher education in all its Member States in a better position to respond to the present and future needs of sustainable human development.