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**Coordination of the policies and activities of the specialized agencies and other bodies of the United Nations system related to the following theme: the role of the United Nations in promoting development, particularly with respect to access to and transfer of knowledge and technology, especially information and communication technologies, inter alia, through partnerships with relevant stakeholders, including the private sector**

## **The role of the United Nations in promoting development, particularly with respect to access to and transfer of knowledge and technology, especially information and communication technologies, inter alia, through partnerships with relevant stakeholders, including the private sector**

### **Report of the Secretary-General**

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## Introduction

1. At its resumed substantive session of 2000, on 18 October 2000, the Economic and Social Council decided on the theme of “The role of the United Nations in promoting development, particularly with respect to access to and transfer of knowledge and technology, especially information and communication technologies (ICT), inter alia, through partnerships with relevant stakeholders, including the private sector” for the coordination segment of its substantive session of 2001 (Council decision 2000/303). The present report aims to assist the Council in its deliberations on the above theme.

2. This report develops further, the subject covered in the report of the Secretary-General (E/2000/52) to the high-level segment of the substantive session of 2000 of the Economic and Social Council entitled “Development and international cooperation in the twenty-first century: the role of information technology in the context of a knowledge-based global economy”, as well as the report of the Secretary-General (A/55/381) to the General Assembly at its fifty-fifth session on the role of the United Nations in promoting development in the context of globalization and interdependence, which focused on promoting the role of the United Nations in the transfer of ICT to developing countries and also on its role in promoting policy coherence, complementarity and coordination on economic, financial, trade, technology and development issues at the global level in order to optimize the benefits of globalization. It should also be read in conjunction with the report of the Secretary-General (E/2001/7) on the ICT Task Force and the report of the Secretary-General (E/2001/66) for the triennial comprehensive policy review of operational activities for development of the United Nations system.

3. The present report explores the theme in an integrated manner with a view to strengthening the development role of the United Nations system, the effectiveness of its development activities and its support for national development strategies and programmes by promoting access to and transfer of knowledge and technology, especially ICT, through building partnerships, in particular with the private sector. The examples of partnerships and United Nations system efforts at technology transfer detailed in this report are not exhaustive; they merely serve to illustrate the nature and extent of efforts under way and to facilitate the sharing of good practices.

## **I. Access to and transfer of knowledge and technology, including information and communication technologies (ICT)**

4. Technology transfer is meant to provide the technical knowledge lacking in a particular production environment. It is the transfer of the stock of production knowledge in both the private and public domains and it takes place through direct and indirect mechanisms. Direct mechanisms include the purchase of capital goods and equipment, the training of nationals of recipient countries in specific technologies, and the hiring of foreign experts and consulting firms. Indirect mechanisms may include turnkey construction of plants and facilities, joint venture partnerships between foreign companies and local companies in the recipient countries, and the establishment of wholly owned subsidiaries of multinational companies.

5. While the different mechanisms provide different opportunities for the transfer of technologies, the outcome is not always assured. Transfer depends on a number of factors, which include, among others, the level of the existing stock of knowledge within the recipient country, the absorptive capacity of the recipient country's firms and individuals, and the policy, legal and institutional framework of the recipient country. Technology transfer does not take place in a vacuum: it is only effective if transferred to an environment with adequate scientific and technological capability and infrastructure as well as the proper institutional and legal framework. Technology transfer is also determined by the existence and enforcement of national and international property rights regimes, and the bargaining power and negotiating capacities of the parties, as well as the balance of market and other factors on which the outcomes of such negotiations are dependent.

6. In today's networked knowledge-based global economy, knowledge and technological development are critical determinants of economic growth and sustainable development. The need for technology transfer arises from the fact that there is considerable concentration of knowledge, and the technologies deriving from it, in a limited number of countries and, furthermore, in a few large firms. The multinational corporations are now responsible for most of the technology transfer through foreign direct investment (FDI) and international trade. This reality — the concentration of technological know-how in a few firms from a few countries — exposes many countries of the developing world to technological dependence, to monopolistic pricing of technology and knowledge products and services and, in some cases, to the imposition of inappropriate technological solutions to their unique set of problems.

7. Furthermore, the patterns of FDIs and international trade — only about 10 of the largest developing countries receive over 90 per cent of FDIs and enjoy a broader participation in international trade that extends beyond selling commodities — suggest that only a few developing countries are recipients of technology transfer through the predominant channels of FDIs and international trade undertaken by multinational corporations.

8. Moreover, there is a large body of knowledge in the public domain that is not accessible to developing countries and their firms and individuals owing to various factors related to the lack of human and institutional capacity, as well as costs. That body of knowledge is potentially useful to developing countries, and a deliberate effort needs to be pursued in order to harness this knowledge and transfer it to developing countries. All these factors necessitate a concerted effort, on the part of the international community, at technology transfer to developing countries, especially the least developed countries.

9. Urgency should be the hallmark of efforts at technology transfer because technology is advancing at a very rapid pace. New advances in the fields of ICT, biotechnologies, and material sciences, to mention a few, are every day further enhancing the already huge potential for dramatically boosting development through "leapfrogging" stages of technological development, providing developing countries with access to markets, information and knowledge that has hitherto been inaccessible to them. However, the fact that this immense potential is not currently being adequately harnessed threatens to further marginalize the economies and peoples of developing countries. It is this potential and the urgent necessity to put it firmly at the service of development for all that should inform the work of the

United Nations system in the area of transfer of technology and knowledge, especially ICT.

10. Another major factor that defines the work of the United Nations system in this area is the appreciation of the capabilities and, at the same time, the limits of both the national and international public sectors in assuring optimal outcomes to development efforts undertaken on their own. The private sector is the primary source of technological innovation, the engine of economic growth, employment and wealth creation. The civil society, especially non-governmental organizations, provide networks of community organization and a framework within which wider consultations on the development process and its intended outcomes can be carried out. The many initiatives of the United Nations system in the area of technology and knowledge transfer have therefore been increasingly characterized not only by cooperation among different agencies of the system, but also by partnerships with civil society, in particular the private sector.

11. The initiatives have been concentrated in a number of areas, such as developing knowledge and technology transfer networks through the utilization of the new technologies, especially the Internet, providing technical assistance to developing countries, building the capacity of developing countries, and assisting them in the creation of a conducive policy environment for the absorption, adaptation and utilization of knowledge and technology.

#### **A. Developing networks**

12. Poor countries — and poor people — differ from rich ones not only because they have less capital but also because they have less knowledge. Knowledge is often complex and costly to create and disseminate, and that is why much of it is created in industrialized countries. Developing countries can acquire knowledge from external sources as well as create their own. The success of the development experience in Asia relative to Africa and Latin America is due in part to the ability of East Asian countries to acquire and apply knowledge by attracting FDI and international trade.

13. There are two kinds of knowledge: technical knowledge or “know-how” and knowledge about attributes. The latter is knowledge that illuminates every economic transaction, revealing preferences, giving clarity to exchanges etc. The lack of such knowledge results in imperfect markets, the collapse of markets or, worse still, the absence of markets, all of which are detrimental to development and hurt the poor.

14. The lack of technical knowledge or know-how has dire consequences; for example, knowledge about how to treat a simple ailment such as diarrhoea has existed for centuries but millions of children continue to die from this ailment because their parents do not know how to treat them.

15. Further, greater amounts of knowledge and information are incorporated into goods and services. Knowledge and information are sources of wealth creation and value added in their own right. As their amount and value increase, there is a proportionate decrease in the amount and value of other inputs such as labour, capital, materials etc. The concentration of knowledge and information-intensive industries in the industrialized countries contributes significantly to the development and technology gap between industrialized and developing countries.

16. However, knowledge is now more readily accessible than ever before in the history of the human race. The changing economics of information will make knowledge even more accessible in future, as the unit costs of computing, communications and transactions continue to decline. Despite this potentially easy accessibility, there are constraints on accessing knowledge, particularly by citizens and institutions of developing countries, and a deliberate effort is needed to generate and share knowledge, hence to establish knowledge networks.

17. Currently, there are four major networks that are pertinent to the issue of knowledge and technology transfer, especially ICT: the Global Development Network, the Knowledge and Technology for Development Network, WIPONET and the Sustainable Technologies Alternatives Network.

18. The Global Development Network (GDN), led by the World Bank in partnership with the United Nations Development Programme (UNDP) and a number of bilateral aid agencies, is an emerging network of institutes around the world that generates and shares knowledge about development. It aims to enhance the quality and availability of policy-oriented research and strengthen the institutions, especially in developing countries, that undertake this work. GDN offers tools, services and networking opportunities to help these institutions and their members join together in the fight against poverty.

19. GDN aims at supporting the generation and sharing of knowledge for development and helping to bridge the gap between the development of ideas and their practical implementation. It operates along two tracks: generating knowledge and sharing knowledge. Generating knowledge will be effected through:

- A research grant competition, which is funded by the World Bank and is administered through a competitive process by regional networks that are partners with the Bank in GDN;
- A global research project, which was launched in coordination with all the regional networks focusing on the broad topic of explaining economic growth or lack of it across regions, using a comprehensive and comparative approach that looks at the following four areas: macro-growth, political economy, private agents, and markets as institutions in the growth process;
- A data initiative, which will sponsor and provide information about training and other activities to support the broader and better use of microdata in macro- and socio-economic research.

20. Sharing knowledge has the following aspects:

- Networking and knowledge management: helping research and policy institutions by fostering vibrant global, regional and electronic networking activities designed to ensure sharing among the development community of the latest research, best practices and new ideas;
- Support activities that emphasize the organizational side of think-tank activity, such as fund-raising, evaluation, and effective dissemination of research products;
- Training: GDN will provide researchers and staff from policy institutions with a range of training and skills-building activities.

21. The use and assimilation of new technologies depend on the existence of basic technological capabilities in developing countries to choose, acquire, generate and apply technologies that are suited to their development objectives. Developing countries need not reinvent the wheel in terms of basic scientific and technological research. This would be a waste of their already limited resources. They need useful technological information on sources and conditions of technology transfer. However, researchers and policy makers from developing countries tend to lack the resources to link into the scientific and technological research debate. In order to address this situation, the United Nations Conference on Trade and Development (UNCTAD) established the Knowledge and Technology for Development Network (KTD.Net).

22. KTD.Net is an electronic network and information exchange system for science and technology for development. The aim of this network is to improve:

- Information-sharing by providing access to the latest and relevant information on science and technology for development as well as links to information on science and technology activities of United Nations bodies;
- Knowledge diffusion, by providing information and identifying best practices with respect to mechanisms, strategies and channels needed to promote technology transfer, diffusion, adaptation and development of technological capabilities in developing countries. News and reports containing information and case studies on science and technology will also be posted online;
- Awareness-building of scientific and technological developments that are of particular importance with respect to fostering socio-economic development in member States.

23. KTD.Net seeks to be an important reference web site on science and technology for development. It therefore has, in addition to hyperlinks to science and technology activities in the United Nations system and other international organizations, links to partnerships and networking programmes in the United Nations system and the public and private sector. These links cover categories such as research partner locator, technology marketplace, technology partnership practices, regulations and policies facilitating international science and technology partnerships, promotion and technical assistance for networks in developing countries, and register of other international science and technology networks.

24. Technical knowledge and science and technology developments involve intellectual property rights (IPR) considerations. While there is a lot of knowledge and information available in the public domain, increasingly most of the knowledge and information embedded in technological advances is subject to IPR protection. This is especially the case in the areas of new technologies that are having a significant impact on the competitiveness of firms and economies and the well-being of peoples within the context of globalization — biotechnology, ICT and new synthetic materials. An effective understanding of the IPR regime is crucial for developing countries in their search for technology transfer and for institutions that assist them in this endeavour.

25. Given that international trade is, besides FDI, the main channel for technology transfer, an important IPR instrument is the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS),<sup>1</sup> which entered into force on 1 January 1995. The agreement maintains that the protection and enforcement of IPR should

contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to socio-economic welfare, and to a balance of rights and obligations. The agreement also provides for specific requirements, such as the disclosure requirement of a patent application, in order to provide incentives for and to facilitate the transfer of technology to developing countries.

26. In 1996, the World Intellectual Property Organization (WIPO) and the World Trade Organization entered into an agreement that provides for WIPO to continue with its legal-technical assistance and technical cooperation activities for developing countries. It also extends such assistance in relation to the TRIPS agreement to those developing countries that are not members of WIPO but are members of the World Trade Organization. One critical element in WIPO's strategy in relation to this specific mandate as well as to its broader mandate is to network the IPR community and to build an IPR resource base at both the global and national levels, hence WIPONET.

27. WIPONET is a global digital information network enabling the integration of intellectual property (IP) information resources, processes and systems of the worldwide intellectual property communities, particularly the intellectual property offices (IPO) of the member States. It is intended to interconnect 332 intellectual property offices in 171 countries, and will be largely based on existing worldwide communication infrastructures and will also provide a portal for other WIPO-provided systems, such as the Intellectual Property Digital Libraries. WIPONET seeks to ensure equitable access for all member States by establishing connectivity for those IPOs that have no Internet access, as well as through the training and development of the necessary human resources.

28. The 1992 United Nations Conference on Environment and Development highlighted the need for access to environmentally sound technologies developed elsewhere and the development of solutions for environmental problems specific to developing countries, which were deemed as being among the major strategic options to meet the challenge of environmentally sustainable development in developing countries. The transfer of technology to developing countries, especially those technologies that reduce waste, cut energy consumption and minimize pollution, combined with the application of local knowledge and the preservation of biodiversity, sustainable use of renewable resources and the prevention of soil erosion, is an important measure in the preservation of the global common.

29. With this in mind, the United Nations Environment Programme (UNEP) in partnership with the Global Environment Facility (GEF) initiated the Sustainable Technologies Alternatives Network in order to enhance improved knowledge management and information-sharing for environmentally sound decision-making and implementation of multilateral environmental agreements, especially in relation to the transfer of environmentally sound technologies to developing countries.

30. The regional commissions have also been active in developing regional networks. For example, the Economic and Social Commission for Asia and the Pacific (ESCAP) has a number of information networks such as the Trade and Investment Information Service Network (TISNET), the International Network for Transfer of Environmentally Sound Technology (INTET) for Asia, and the regional Maritime Information Network (MARINET), among others.



## **B. Technical assistance and capacity-building**

31. International trade is one of the main channels of knowledge and technology transfer to developing countries. A new and emerging dimension to international trade is e-commerce. Along with its potential to enhance developing-country access to markets, there is the obvious danger of e-commerce's emerging as a new barrier to trade by many developing countries because of the lack of the necessary infrastructure development to ensure connectivity as well as the lack of the necessary human and institutional capacity for effective participation in e-commerce transactions.

32. However e-commerce itself offers possibilities for firms in developing countries, which tend to be small, to access markets for goods and services to their advantage. E-commerce will make it easier for artisans and small and medium-sized enterprises (SMEs) to access business-to-consumer (B-2-C) markets as well as to tap into business-to-business (B-2-B) and business-to-government (B-2-G) supply chains; it will also facilitate activity, including market information acquisition, on the global market for agricultural and tropical products. E-commerce will also allow individuals and enterprises in developing countries to operate more efficiently and to provide services anywhere in the world irrespective of location and physical distance.

33. In order for the possibilities of e-commerce to be realized by developing countries, there is an urgent need for action to overcome infrastructural bottlenecks in telecommunications, transport, logistics and customs operations. There is also a need to actively promote and nurture the development of e-commerce in developing countries. A number of United Nations bodies, notably UNCTAD and the International Telecommunication Union (ITU), have been very active in this area.

34. UNCTAD has been providing technical assistance, through seminars, workshops, advisory services and training, in the application and diffusion of ICT in the areas of trade promotion, transport and other trade-related services. It has also created programmes such as the Trade Analysis and Information System (TRAINS), the Automated System for Customs Data (ASYCUDA), the Advance Cargo Information System (ACIS), and the Trade Point Programme.

35. TRAINS is a computerized information system available to external users to increase transparency in trading conditions. It is intended for use by policy makers and economic operators engaged in exporting.

36. ASYCUDA is applied in over 80 developing countries and countries with economies in transition as an instrument to reform and modernize the management of their customs administrations. The objective is to speed up customs clearance through the introduction of computerization and simplification of procedures, thus minimizing administrative costs to the business community and the economy as a whole. The introduction of ASYCUDA also allows an increase in customs revenue by ensuring that all goods are declared, that duty/tax calculations are correct and that duty/exemptions, preference regimes etc. are correctly applied and managed. Furthermore, it helps producing reliable and timely trade and fiscal data to assist in the economic planning process. In order to be responsive to the needs of trade operators, in the development and implementation of ASYCUDA, UNCTAD consulted and continues to consult with all the stakeholders, especially the private sector.

37. ACIS is a logistics information system that uses ICT and microcomputing technology to improve transport efficiency in developing countries by tracking equipment and cargo on the different transport modes and at interfaces, and providing information in advance of cargo arrival. ACIS provides both public and private sector operators and ancillaries with reliable, useful and timely information on transport operations. ACIS also produces regular performance indicators that enable management to remedy deficiencies and to make full use of the existing infrastructure and equipment capacity. It also provides data for economic planning and fosters optimal modal distribution patterns.

38. An important area of assistance has been the transfer of knowledge with regard to the use of the Internet for the promotion of local enterprises and the dissemination of information about developing countries. The Trade Point Programme — implemented in partnership with the Economic Commission for Europe (ECE), which contributes its expertise in standards for electronic data, and the International Trade Centre (ITC), which provides the trade information — uses ICT, especially the Internet, as a tool to increase the participation of developing and especially least developed countries in international trade and to enhance their competitiveness by reducing their costs. Trade Points have been serving as centres of Internet access for SMEs in developing countries that could not afford their own Internet connections. In order to overcome the problems of inadequate telecommunications lines in a number of developing countries, the Trade Point Programme also set up an Internet incubator service for interested government agencies and enterprises from developing countries.

39. In order to attract private sector participation, the Trade and Development Board of UNCTAD recently took a decision to transfer the Electronic Trading Opportunities (ETO) system — a key part of the Trade Point Programme — to a suitable non-profit entity. This led to the creation, in November 2000, of the World Trade Point Federation, a non-profit organization representing all the trade points. Its main aim is to conclude strategic partnerships with private sector players capable of contributing to a further development of the programme.

40. ITU launched the Electronic Commerce for Developing Countries (EC-DC) initiative to enable developing countries, in particular the least developed countries, to be active participants in the networked economy. The EC-DC Initiative has the following four objectives: (a) to coordinate the establishment of e-business infrastructure; (b) to enable the transfer of e-business technologies; (c) to address e-business policy and strategy issues; and (d) to forge neutral and non-exclusive partnerships with industry. This initiative is being carried out in partnership with the World Trade Centre (WTC), Geneva, and a private sector entity and is now being expanded to 110 countries from all regions.

41. One of the main activities is aimed at working with industry partners and local governments to deploy multi-purpose community telecentres (MCTs). ITU, working with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Development Research Centre (IDRC) and a number of other partners, has already deployed MCTs in Bhutan, India, the United Republic of Tanzania, Mali and Uganda and more are planned for other developing countries.

42. The ability of a developing country to participate actively in e-commerce and also to successfully acquire, adapt and utilize a range of other technologies depends not only on its having the right infrastructure, but also on its human and institutional

capability. A country will need individuals embodying skills, training and experience as well as inclination. It will also need institutions that facilitate the sharing and management as well as the legitimization of knowledge. Finally, it will also need a common strategic framework for technology acquisition and utilization. The following are examples of the work of agencies of the United Nations system in the area of human and institutional capacity-building.

43. UNDP established a Sustainable Development Networking Programme (SDNP) which is part of its effort to address the increasing "information gap" between industrialized countries and developing countries. SDNP operates at the country level, launching and supporting local Internet sites, and building national capacities and knowledge resources. The programme focuses on connectivity, capacity-building and content creation and dissemination based on a participatory and multisectoral approach. In 1996, the programme launched the Small Island Developing States Information Network (SIDSNET) as a community of 42 developing-country islands connected through the Internet for sharing information and coordinating action on key issues, as identified at the 1994 Global Conference on the Sustainable Development of Small Island Developing States. SIDSNET is implemented in close cooperation with the Alliance of Small Island States (AOSIS) and provides dedicated networking and training to SIDSNET partners at the national and regional levels.

44. Other agencies of the United Nations system are also making use of the possibilities provided by Internet technologies in their development capacity-building work. FAO, for example, has launched an initiative, the Farmer Information Network (FarmNet), which links organized groups of farmers in developing countries to service agencies and thus cuts costs and empowers the farmers in their market transactions as well as strengthens their productive capacities. This builds on FAO's experience in Chile and Mexico where electronic networks provided farmers with essential information and data on crops, inputs, prices, markets, credit services, weather conditions etc.

45. The International Civil Aviation Organization (ICAO) has begun efforts to extend the use of its ICAO-Net worldwide to all its member States; it is now being extended to include other aviation-related online information. ICAO has a long-established partnership with a private sector entity, the Société Internationale de Télécommunications Aéronautiques (SITA), which will be expanded to include the provision of internet access to those States that currently lack connectivity. Also in cooperation with SITA, ICAO will promote the use of the top-level domain name ".aero" by legitimate aviation-related entities.

46. The United Nations Centre for Human Settlements (Habitat), working in close cooperation with civil society partners, especially the foundations and the private sector, has established various extranets, databases and graphical information systems to improve the information flow and knowledge-sharing on human settlement issues. One such extranet is the Best Practice Extranet, which serves as a communication and knowledge-sharing platform for an expanding global network of training, capacity-building and policy advocacy institutions. The platforms content is dedicated to the documentation, dissemination, exchange and discussion of successful solutions for sustainable human settlements.

47. WIPO Worldwide Academy uses Web-based and other methods enabled by technology such as videoconferencing to bring teachers specializing in IPR issues

closer to students and other interested parties in all corners of the world. Enhanced connectivity will further facilitate the availability and scalability of this approach to learning and training, especially in developing countries, and WIPO is therefore working at providing connectivity through its WIPONET initiative.

48. The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) has a Vocational and Educational Training Programme for Palestinian refugees in Jordan, Lebanon, the Syrian Arab Republic and the Palestinian territories. In 1998, it launched a Computer and Information Technology Initiative (CITI) with the assistance of a donor grant. This initiative is providing computer training facilities and is introducing a series of instructor and management training programmes to raise both the instructional and administrative standards at the various vocational training centres as well as to provide relevant skills to its trainees as necessitated in response to demands by the market. This programme is being carried out in cooperation with UNESCO and the European Union (EU).

49. The human resource development activities at ITU include a number of courses delivered through the ITU Centres of Excellence, the Global Telecommunication University and the ITU Virtual Training Centre. ITU has also delivered a host of distance learning seminars on topics ranging from telecommunications regulation to national frequency management.

50. The International Labour Organization (ILO) is increasingly taking the opportunity afforded by new technologies to deliver its technical assistance, for example by making use of interactive distance learning modalities in its training programmes in Bosnia and Herzegovina, which are aimed at ensuring the speedy reintegration into the labour market of the displaced population. At its International Training Centre in Turin, ILO is also making use of the Internet to supplement its residential programmes by providing Web-based learning assistance services and training modules for clients. The Centre is also developing a new computer programme, called the Internet Course Reader, which allows learners to quickly retrieve their messages from the tutor on the Internet and then cut off the connection and work offline. This is quite important for many developing countries with poor telephone connections, expensive Internet service providers and unreliable electricity sources.

## **C. Policy development**

51. The transfer and diffusion of knowledge and technology, including ICT, are dependent on a conducive policy environment. For example, for e-commerce to take hold and develop in a country, issues of governance, including consumer protection, security of transactions, privacy of records, taxation and intellectual property issues, will need to have been resolved. Likewise, the trade policy stance of a country and its attitude to FDI will, in addition to natural factors such as resource endowments, determine the extent and nature of the technology transfers it receives. A country's education and training policies, inter alia, in relation to the education of girls and the training of women, will determine its capability to acquire, adapt and utilize technology, including ICT. In short, policies do matter in the generation, acquisition, adaptation and utilization of technologies, including ICT.

52. Proceeding from the realization that policies do matter in ensuring optimal transfer of knowledge and technology to developing countries that would strengthen

economic growth, employment creation and sustainable human development, agencies of the United Nations system have been engaged in a range of activities for facilitating policy development. These vary from generating data and statistics that inform policy advice to arranging meetings for experts and policy makers at the national, regional and international levels. The following are examples of the work of some of the United Nations system agencies in this area.

53. In 2000, UNESCO launched the Information for All programme which provides a platform for international and regional policy discussions and partnerships as well as guidelines for action on preservation of information and universal access to information; participation of all in the emerging global information society; and ethical, legal and societal consequences of ICT developments. It supports the development of common strategies, methods and tools for building a just and free information society and for narrowing the gap between the information-rich and the information-poor. The Programme is a key element in the fulfilment of UNESCO's mandate to contribute to "education for all", to the "free exchange of ideas and knowledge" and to "increase the means of communications between peoples".

54. The UNCTAD secretariat in conjunction with the Commission on Science and Technology for Development has addressed several important aspects of the diffusion and application of information technology for development and published them recently in the tenth issue of the *Advanced Technology Assessment System (ATAS): Information Technology for Development*.<sup>2</sup> UNCTAD, again in conjunction with the Commission, has also contributed to the preparation of the publication *Knowledge Societies: Information Technology for Sustainable Development*<sup>3</sup> which contains a synthesis of a wealth of information and commentary on the social and economic benefits of ICT for developing countries. This publication was intended as a resource document for policy makers and ICT producers and users, especially in developing countries. It brings together the views of government policy makers, industrialists, researchers and other stakeholders in developing and industrialized countries and draws on the results of research in the field of science and technology policy studies.

55. ITU does considerable work in the area of policy development, research and dissemination. It has taken the lead in measuring the communication gaps among and within countries through its compilation of telecommunications indicators, and conducting of extensive country case-studies to measure the degree of Internet diffusion and the factors affecting its take-up. It also operates an Information Clearinghouse to disseminate the wealth of information it acquires. ITU is also the lead agency in the organization of the World Summit on the Information Society, scheduled for 2003, which is expected to adopt an action plan on bridging the digital divide.

56. ILO has been carrying out significant policy development work in the area of ICT and employment. It devoted its major publication this year — *World Employment Report 2001: Life at Work in the Information Economy*<sup>4</sup> — to an in-depth analysis of the implications of ICT for the world of work. Also, within its Sectoral Activities Programme, a global tripartite forum for discussions on issues of technology and labour at the industry level, ILO has recently examined issues such as the employment consequences of multimedia convergence and the effects of

e-business on labour issues in the transport equipment industry. Conclusions from these global tripartite meetings are intended to influence the national policy debates.

57. The regional commissions have been actively engaged in the area of policy development. For example, the Economic Commission for Africa (ECA) has elaborated and adopted the Africa Information Society Initiative (AISI), an action framework to build Africa's information and communications infrastructure. AISI is also the principal activity on harnessing information technology for development within the United Nations System-wide Special Initiative for the Implementation of the United Nations New Agenda for the Development of Africa in the 1990s. In another example, the Economic and Social Commission for Western Asia (ESCWA) launched a regional initiative aimed at assisting member countries in the design, implementation and management of novel institutional forms, namely, technology incubators, technology parks and high-technology industrial clusters, to facilitate the diffusion of new technologies, especially ICT in specific user sectors. This initiative was launched as a result of an extensive study of such institutions, which was presented at a regional meeting attended by experts and decision makers from Governments and enterprises in the member countries.

58. Experience gained in the design, implementation and management of new institutional forms is expected to lead to the formulation of more relevant policy frameworks and to the promotion of partnerships between the private and public sectors as well as new civil society institutions aimed at technology and knowledge acquisition and dissemination.

## **II. Forging partnerships for development**

59. The United Nations system contains an unparalleled wealth of specialized agencies and entities that can mobilize the expertise needed to address all major policy issues. These agencies and entities have already demonstrated their capacity to facilitate broad multilateral negotiations that have set the global policy agenda. The challenge they face is implementing that policy agenda in order to realize the goals of poverty eradication and sustainable human development.

60. It is becoming increasingly clear that the further elaboration and implementation of the global policy agenda necessitate the forging of partnerships with other development actors, especially the private sector and non-governmental organizations. Non-governmental organizations have the capacity to galvanize the voices of many different sectors of society and to provide a framework for local consultation and action. Networks of non-governmental organizations are part of the social capital that is now emerging as a crucial input in ensuring beneficial outcomes to development efforts.

61. The private sector, on the other hand, has at its disposal the financial and technological resources that, if utilized appropriately within the context of a genuine partnership, can make a positive contribution to the development process. Also, the private sector, especially the multinational corporations, is the driving force of the process of globalization — the increasing integration and interdependence of national economies and societies. The private sector therefore has a role, if not an obligation, as well as an interest in ensuring that globalization is equitable to everyone.

62. In 1999, the Administrative Committee on Coordination (ACC) considered the issue of partnerships with civil society, especially the private sector, and concluded in particular that without the private sector's developing and marketing new technology and investing in developing countries, some of the goals of the United Nations would be unattainable. At the same time, without peace and human security, which are the main goals of the United Nations, business is unlikely to prosper either. This provides a good basis for cooperation between the United Nations and the private sector — they can cooperate in the pursuit of peace and human security which also create the necessary preconditions for business to prosper, particularly in new markets that have hitherto been inaccessible. In the light of these possibilities, ACC endorsed the principle of partnerships between the United Nations system and civil society, especially the private sector, but emphasized that such partnerships should be inclusive of all stakeholders and have a strong development dimension. It also noted that engaging meaningfully the private sector was a challenging task that required sustained attention and sensitivity to different cultures and possible conflicts of interest.

63. There indeed remain a number of issues surrounding the question of partnerships between the United Nations system and civil society stakeholders, especially the private sector. First, developing countries have a limited influence on the tide of global forces that affect them. They are concerned that partnership arrangements between the United Nations system and the private sector will further undermine their weak position in international economic policy-making. These are legitimate concerns. At the same time, as the example of the Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (UNAIDS) and its own partnership efforts (see box 1) demonstrates, appropriately constructed partnerships can incorporate the principle of intergovernmental oversight while allowing for the necessary flexibility for partnership. This is also the approach the Economic and Social Council used in the recent establishment of the ICT Task Force.

**Box 1**

**Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (UNAIDS)**

The Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (UNAIDS) is an innovative partnership effort of the United Nations system. It was created in 1994 by the Economic and Social Council and includes seven organizations of the United Nations system (the World Health Organization (WHO), the World Bank, the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the United Nations International Drug Control Programme (UNDCP), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Development Programme (UNDP)) which are known as the co-sponsors. The global mission of UNAIDS is to lead, strengthen and support an expanded response to the pandemic that will:

- Prevent the spread of HIV;

- Provide care and support for those infected and affected by the disease;
- Reduce the vulnerability of individuals and communities to HIV/AIDS;
- Alleviate the socio-economic and human impact of the pandemic.

The strategic goal of UNAIDS is to catalyse, strengthen and orchestrate the unique expertise, resources and networks that each of the partners offers. It enables the partners to expand their outreach through strategic alliances with other United Nations agencies, national Governments, the private sector, non-governmental organizations and other community organizations.

UNAIDS itself has now spun off two partnership efforts of its own: one is the International Partnership against AIDS in Africa (IPAA) and the other is a low-cost drug initiative with the pharmaceutical companies. IPAA was born from the fact that nearly 70 per cent of the world's infection by HIV/AIDS and 90 per cent of deaths from AIDS are to be found in Africa which is home to merely 10 per cent of the world's population. In sub-Saharan Africa, infection rates are highest, access to care is lowest, and social and economic safety nets that would help families mitigate the impact of the epidemic are grossly inadequate. IPAA brings together all the partners and stakeholders to focus on the AIDS pandemic in sub-Saharan Africa within the framework of the United Nations system-wide efforts in respect of Africa.

In May 2000, UNAIDS, in partnership with five pharmaceutical companies, launched an initiative to explore ways in which individual companies could, on a country-by-country basis, improve access to low-cost HIV/AIDS-related drugs, under specific conditions related to national legislation, state of development of the health system, and coordination requirements, among others.

Three countries, Rwanda, Senegal, and Uganda, have reached agreement with most of the companies. Country missions have been undertaken in 11 other countries (8 in Africa, 1 in Asia and 2 in Latin America). More than 30 countries have sought assistance from UNAIDS. UNAIDS has worked and continues to work with the pharmaceutical industry to improve access to HIV care and treatment. In particular, it plays a pivotal role in the preparation of strategic plans for care by individual countries. UNAIDS supports the production of low-cost generic drugs of assured quality, provided that this is done in accordance with national laws and international agreements. Towards this end, it has broadened the partnership with industry to include 29 manufacturers of generic products and 11 other providers of diagnostics and commodities. UNICEF is coordinating the assessments of the expression of interest by these additional private sector companies.



64. Another concern, especially among the non-governmental organization community, is that partnership arrangements with the private sector can result in the private sector's influencing the United Nations development agenda. The experience of partnership formation so far has been in conformity with the objectives of the United Nations and has sought to advance its development goals (see boxes 2 and 3).

#### Box 2

##### **Netaid.org**

Netaid.org is a partnership model founded by the United Nations Development Programme (UNDP) and Cisco Systems. This model demonstrates the efficiency of bringing together resources of diverse partners to accomplish specific goals without creating a new bureaucratic structure. Netaid.org uses the Internet to empower people to take action on extreme poverty around the world. It is a hub of many online activities generating interest in poverty issues, providing learning about poverty, and providing an opportunity for informed action on poverty.

The Netaid.org Foundation is a public benefit not-for-profit entity registered in the United States of America, which manages Netaid.org's activities and partnership and oversees the quality and integrity of the activities implemented through the different partnership alliances. Netaid.org is governed by a Board of Directors, which meets on a regular basis. The Board's composition draws on expertise from the international development community and the technology community as well as eminent personalities from the world of music and arts. The Foundation is served by a small staff headquarters in New York and is supported by a range of partner offices in various locations.

Netaid.org's core operations (programme and technology development, marketing and alliance-building) are funded by a generous endowment by a private foundation and from the partner organizations such as Cisco Systems, UNDP, the United Nations Children's Fund (UNICEF) and the United Nations Volunteers (UNV) which provide cash, significant staff time and in-kind contributions. This arrangement ensures that 100 per cent of an individual's donation through Netaid.org goes to the selected project(s) and therefore benefits the recipient individuals and communities directly.

Netaid.org, in partnership with other organizations that have the necessary expertise and reach, selects the programmes it features on its web site for direct support by the public. This selection is based on the following criteria:

- Innovative approach to addressing poverty in a way that empowers the recipient with due cognizance given to gender equality, environmental protection and cultural integrity;
- Strengthening the capacity of local organizations in the recipient communities;

- Clarity of objectives with measurable results in given time framework;
- Collaboration and willingness to work with a variety of organizations and coalitions;
- Ability and willingness to interact with Netaid.org's online community and to report progress on the Internet;
- Adding to the geographical diversity of issues and regions in a manner that will enrich the learning experience about the many facets of poverty;
- Ability to capture the imagination of the media and the public in a way that will leverage increased attention and resources in order to increase opportunities for people living in poverty.

## Box 3

**Office of the United Nations High Commissioner for Refugees (UNHCR) and Microsoft**

Microsoft donated 100 registration kits to the Office of the United Nations High Commissioner for Refugees (UNHCR) at the height of the Kosovo emergency. Since this effort, UNHCR and Microsoft have continued to cooperate. They have developed revised software using the same registration kits and last year deployed them in Senegal, India, Côte d'Ivoire and Zambia, registering thousands of refugees. Microsoft volunteers have continued to support this effort through volunteer staff and funds. There are plans to extend the use of this technology to additional countries.

65. Developing countries are also concerned that greater private sector involvement in the work of the United Nations would deflect the commitments that the industrialized countries made, such as allocating 0.7 per cent of gross national product (GNP) for official development assistance (ODA) or initially carrying a disproportionate burden of the cost of curbing carbon dioxide (CO<sub>2</sub>) emissions. While it is legitimate to guard against such a possibility, this should not become an obstacle to developing new and innovative ways of interacting with other major actors in the real world of international economic relations. Practical experience has demonstrated that partnerships have provided for the availability of innovative ways of financing the transfer of the needed technologies and initiatives in the area of sustainable development as evidenced by GEF and the partnerships it spun off (see box 4).

## Box 4

**Global Environment Facility (GEF)**

The Global Environment Facility (GEF) was established to forge international cooperation and to finance actions that would address four critical threats to the global environment: biodiversity loss, climate change, degradation of international waters, and ozone layer depletion. Related work to stem the problem of land degradation is also eligible for GEF funding. GEF was launched in 1991 as an experimental facility and is a very good example of inter-agency cooperation, as it involves the World Bank, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) as lead agencies. It was restructured after the Rio Earth Summit.

GEF brings together 166 member States, leading development institutions, the scientific community, and a wide spectrum of private sector and non-governmental organizations to pursue a common global environmental agenda of preserving the global common. Non-governmental organizations at both the local and global levels are very active in the work of GEF. More than 150 GEF-financed projects are executed by or co-executed with non-governmental organizations or contain contracts or subcontracts with non-governmental organizations. More than 60 regional and global non-governmental organization networks are involved in the design and implementation of GEF-funded transboundary waters projects. GEF's small grant programme has to date provided grants to finance more than 1,200 non-governmental organization-executed projects.

GEF has a strong focus towards private sector involvement in its operations. For example, it has helped create innovative pathways to engage and increase private sector commitments to the use and application of environmentally sound technologies, in particular clean energy technologies. The operational approach of GEF is to construct partnerships in its funding.

66. Market failure results in a situation where technological knowledge that is available is not translated into products needed by citizens of developing countries and also one where existing products are not made available to citizens of developing countries because of the lack of incentives in the context of profit considerations. In order to deal with this phenomenon, the United Nations system has crafted a number of partnerships of which the Global Alliance for Vaccines and Immunization (GAVI) (box 5), the Epidemic Meningitis Vaccines for Africa Project (box 6) and the Roll Back Malaria initiative (box 7) are examples.

**Box 5****Global Alliance for Vaccines and Immunization (GAVI)**

The Global Alliance for Vaccines and Immunization (GAVI) was established with a broad membership of partners from the public and private sectors. It seeks to address the following three major challenges:

- 30 million children still do not have access to routine immunizations services and 25 million of those children live in the poorest countries of the world;
- New cost-effective vaccines against killer diseases are not being introduced into the poorest part of the world;
- Not enough funding is going into research and development (R&D) for vaccines against diseases that are public-health priorities in the developing world.

In addition to agencies such as the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), which have traditionally been involved in immunization, other partners have either renewed their commitment to immunization or declared a new interest in this area, namely, the World Bank, the Rockefeller Foundation, the pharmaceutical industry, the Bill and Melinda Gates Foundation, and a number of technical and research institutions.

GAVI provides a long-range strategic focus for its members and ensures that a strong voice can advocate for immunization in dialogues and debates on health sector reform and in broader development discussions, for example, on the mechanisms of debt relief. Strategies to expand coverage in terms of both the number of children vaccinated and the number of antigens given to each child are being developed through this alliance and its task forces.

Task forces chaired by partner agencies and representatives of key constituencies have been established to deal with financing (World Bank, lead), country coordination (WHO, lead), advocacy (UNICEF, lead) and research and development (WHO, academia and industry, co-chairs). These task forces bring together partners to coordinate work plans and push forward action towards reaching GAVI milestones.

GAVI has attracted substantial new resources to catalyse action towards these goals. The Global Fund for Children's Vaccines (GFCV) is one of the financing tools that was established by GAVI partners to provide additional financial support to the immunization programmes in the poorest countries (those with a gross national product (GNP) per capita of less than US\$ 1,000). GFCV is supported by generous private and public contributions. It is an independent mechanism, which disburses financing according to recommendations from the GAVI Board. These funds are used strategically to provide incentives for programme assessment, long-range planning, partner coordination at country level, introduction of new and underused vaccines, immunization safety, and

improvement of immunization services. In addition to the financing of vaccines, the global Fund provides countries with non-earmarked funds on the basis of performance achieved, as measured by increases in the number of children immunized.

#### Box 6

##### **Epidemic Meningitis Vaccines for Africa Project**

Devastating epidemics of meningococcal disease have caused enormous suffering in the sub-Saharan Africa “meningitis belt” countries for more than 100 years. The belt stretches from Ethiopia in the east, to Senegal and the Gambia in the west, with a population at risk of over 200 million. Countries within the meningitis belt suffer from recurrent meningococcal epidemics, often in irregular cycles every 5-12 years. During an epidemic, attack rates are high in all age groups, including young adults who are in the prime of life. The human tragedy for its victims and their families thus feeds into a social and economic disaster for the countries affected. The required public-health interventions are enormous, disruptive to other programmes, and expensive.

In order to prevent and ultimately eliminate epidemic meningococcal disease in the African meningitis belt, the World Health Organization (WHO) and the Bill and Melinda Gates Children’s Vaccine Program under the umbrella of the Global Alliance for Vaccines and Immunization (GAVI) have created a partnership to accelerate the development, evaluation and introduction of serogroup A plus C meningococcal conjugate vaccine in a short time and at an affordable price. The technology to produce safe and effective meningococcal conjugate vaccines for Africa has been available for more than 10 years. Highly successful prototypes have been evaluated and shown to be highly immunogenic and to induce immunologic memory in African infants. Yet, these programmes have been halted because serogroup A meningococcal disease is limited to persons in the poorest countries, and the returns on investment are perceived to be too low.

For these reasons, WHO and the Children’s Vaccine Program have explored different alternatives to establish a public/private sector partnership aiming at lowering costs and risks of product development and seeking incentives by creating a market, providing other economic rewards or removing economic deterrents. This public/private sector partnership could become a model for push-pull funding for other developing-country market vaccines. At the same time, the partners are committed to seeking the necessary resources to ensure procurement in sufficient volume to meet projected needs, and to carefully planning the introduction of the vaccine through mass and routine immunization programmes in synergy with other public-health initiatives in Africa.

## Box 7

**Roll Back Malaria (RBM) initiative**

The Roll Back Malaria (RBM) initiative was launched in 1998 by the World Bank in conjunction with the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the United Nations Development Programme (UNDP). RBM aims to halve deaths from malaria by the year 2010. RBM operates in the context of sustainable health system development and would draw on each participating agency's unique strengths, pooling resources in an effort to eliminate costly overlaps.

The initiative comprises malaria-affected countries, United Nations agencies, development banks, bilateral donors, Organisation for Economic Cooperation and Development (OECD) countries, the research and control communities, the private sector and non-governmental organizations. RBM is not a financing mechanism, but rather aims to support countries through global partnerships to ensure that they have effective access to the information, technology and financial resources required to reduce their burden of malaria disease. In January 1999, WHO established a five-year RBM Cabinet Project, based in Geneva, to serve the global partnership in strategy development and as a secretariat.

Two other important initiatives have close ties to RBM. The Multilateral Initiative on Malaria (MIM) was launched in 1997 by 37 countries and 3 intergovernmental agencies to increase research funding and enhance communication and networks to foster effective malaria research. It has since focused upon strengthening the capacity of African researchers to develop and improve tools for malaria control.

Another initiative — the New Medicines for Malaria Venture (MMV) — deals with the challenge of defining effective treatment protocols in the face of increasing drug resistance by malaria parasites. It is financed by the public sector and philanthropic bodies, and through in-kind support from industry partners. MMV now operates as an independent foundation and was launched as a response to the lack of industry incentives to pursue development of new malaria products. It operates as a virtual industrial research and development (R&D) programme, which has as its goal the registration and commercialization of a new affordable and appropriate anti-malarial drug every five years.

67. The global development challenge is daunting and requires dialogue among all the actors. This is especially true in the light of the very rapid changes driven by information and communication technology. More than ever, development and socio-economic advances will depend on the possession of knowledge and information. In the transformation towards a global knowledge society, information and communication technologies will be critical determinants of economic growth and human and social well-being. While technologies, especially ICT, cannot in themselves solve the problems of poverty and underdevelopment, they offer a huge

potential to generate, access, disseminate and share knowledge, which is important for sustainable human development. However, there are also inherent dangers, threats and obstacles that must be addressed: information flows and knowledge acquisition may be influenced or even impeded by power, institutions and people's interpretations of, and attitudes towards, information, its sources and the transmittal medium. Understanding these complex interrelationships will be vital if humanity is to optimally harness the benefits of technology, especially ICT. Agencies of the United Nations system are engaged in the search for understanding of these complex issues in the framework of a global dialogue — the Global Knowledge Partnership — that is necessary in order to lay the foundations for a truly global and empowering knowledge and information society (see box 8).

#### Box 8

##### **Global Knowledge Partnership (GKP)**

The Global Knowledge Partnership (GKP) is a partnership of public, private and not-for-profit organizations that share the same mission and commitment to sharing information, experiences and resources to promote broad access to, and effective use of, knowledge and information as tools of sustainable, equitable development. GKP emerged from the cooperation of several dozen organizations in sponsoring the Global Knowledge 97 conference entitled "Knowledge for Development in the Information Age" in Toronto, Canada, in June 1997.

Members of the Partnership fulfil certain roles and responsibilities including cooperating through a variety of initiatives such as pilot projects, conferences and workshops, capacity-building initiatives, information-sharing and project coordination. Organizations become members of GKP by meeting certain criteria. Included in these criteria is the commitment to contribute to at least one initiative organized by present members of the Partnership. While all members of the Partnership endorse the general principles and goals of the Partnership, members are free to decide which Partnership-related initiatives should receive their support and active involvement. Membership in GKP provides an organization with many benefits, including access to resources and information that help it achieve its development goals and objectives.

GKP builds understanding of how knowledge and information, especially the use of information and communication technologies (ICT), can and should fundamentally change the nature of international development efforts in the information age and, in that context, builds on lessons from joint evaluation and learning exercises. GKP works on expanding this understanding within GKP agencies as well as among other organizations throughout the broader international development field. GKP supports communications channels that:

- Help GKP members widely disseminate "knowledge for development" information;
- Facilitate communication among GKP members in order to encourage collaborative activity;

- Support communications and feedback to GKP members on a wide range of “knowledge for development” projects and policies.

GKP helps organizations around the world to build capacity in effectively developing, sharing and applying knowledge, including the capacity to develop appropriate policy and regulatory frameworks for knowledge societies. GKP facilitates collaboration among the different GKP groups, including regional networks, which in turn would lead to design and implementation of innovative models and conduct of joint projects and initiatives involving different sectors. GKP seeks to expand the opportunities for developing countries to play equal roles in decision-making.

The GKP secretariat, which is based at the National Institute of Technology of Malaysia, supports the Partnership, prepares meetings and implements decisions. It is responsible for carrying out three broad sets of core services:

- Programme and analytical support to GKP, its committees and to the broader Partnership;
- Management, administrative, informational and communications services on behalf of the Partnership;
- Nurturing partnerships and managing relations, both within and outside of GKP, in support of its goals and mandate.

68. As mentioned earlier, private sector investments have been confined to a few larger emerging markets in developing countries. The East Asian experience shows that in order for developing countries to enjoy accelerated growth rates that result in real poverty reduction, they need to attract private investment into their productive sectors. Agencies of the United Nations system have been involved in providing assistance to developing countries in order to help them attract the needed foreign investment. SOFTBANK Emerging Markets (see box 9), which constitute a new dimension of that effort, involve partnership with a private sector company that makes available real resources for investments in developing countries. This is but another example of the truth of the assertion that the private sector has at its disposal the financial strength and technological wherewithal that, if captured properly within the context of a genuine partnership, can make a positive contribution to the development process.



## Box 9

**SOFTBANK Emerging Markets (SBEM)**

SOFTBANK Emerging Markets (SBEM) is a joint venture project between the International Finance Corporation (IFC) of the World Bank and SOFTBANK Corporation, a Japan-based global Internet company. IFC is playing a major role in the structuring of the project as well as in its implementation. It was instrumental in conceiving the project as an effective mechanism to accelerate the spread of the Internet revolution and knowledge diffusion to the emerging markets of developing countries. IFC's presence in the project also helps to focus attention on the opportunities in developing countries in this rapidly developing industry; provide the credibility necessary for the project to attract top-level strategic business partners and entrepreneurs; provide the emerging markets with knowledge and expertise that will be critical for the successful implementation of the project; identify some of the constraints impeding the diffusion of Internet applications; and bring parallel investment and expertise to developing the enabling physical and commercial infrastructure.

SBEM is incorporated in the United States of America, but is responsible for incubating Internet companies in some 100 developing countries. It aims to establish Internet-related businesses in developing countries by establishing a wide series of partnerships with key industry players. It follows a two-pronged approach by:

- Setting up holding companies with established Internet companies to transfer and adapt their businesses to different markets;
- Helping promote the development of local home-grown Internet businesses by backing local entrepreneurs.

The initiative brings successful leading-edge Internet models to developing markets, and fosters local enterprises, through the incubation approach which allows entrepreneurs to focus on business concepts while a core of centrally based experts handles many of the ancillary business start-up requirements. Growth of e-business and Internet-based enterprises in the developing world will narrow the gap, or digital divide, between countries with access to information technology and countries that are hampered by reliance on traditional sources of information and business tools.

The project seeks to improve Internet access levels in targeted countries by generating investor interest in emerging markets, which in turn should help lower the price of Internet access and increase the number of subscribers. SBEM also promotes free or subsidized Internet service to schools and other educational institutions to increase knowledge and access for people in developing countries.

SBEM uses five approaches to bridging the digital divide:

- Targeting virtually all emerging markets, initially some 100 countries;
- Involving key Internet and infrastructure technology providers;
- Partnering with local companies and entrepreneurs in each of its target markets;
- Providing needed risk capital;
- Using the business incubator approach in order to facilitate accelerated roll-out of new companies.

SBEM establishes joint ventures with leading Internet companies to oversee the company's global roll-out in the targeted developing countries. These new joint venture enterprises in turn create joint ventures with local entrepreneurs and investors to build, launch and operate local Internet companies, utilizing the parent's model, for each targeted country. In determining target countries, emphasis is placed on the nation's commitment to Internet development, adequate penetration of telephone, wireless and broadcast systems, and the existence of sufficient enabling infrastructure to make Internet implementation meaningful.

SOFTBANK and IFC will join with leading Internet infrastructure providers to form a Global Internet Centre that will supply state-of-the-art technology infrastructure and related hardware and services to SOFTBANK Emerging Markets and its joint venture companies. This should foster technology transfer and the development of a mature technological base in the target countries. SOFTBANK and IFC have also approached, and received expressions of interest from, some key Internet firms and infrastructure technology companies, which would participate as investors and technology providers in the initiative.

### III. Conclusions and recommendations

69. Knowledge and technological developments are critical to economic growth and sustainable development as well as to the effective and beneficial integration of developing countries in the new knowledge-based global economy. Sustainable development on a global basis requires accelerated transfer of knowledge and technology, especially ICT, from developed to developing countries.

70. Partnership between the public sector and civil society, including the private sector, is emerging as an essential approach in ensuring real, tangible and sustainable transfer of knowledge and technology, especially ICT, to developing countries. The private sector has at its disposal the financial strength and technological wherewithal which, if utilized appropriately within the context of a genuine partnership, can make a positive contribution to the development process. Civil society institutions such as non-governmental organizations are instrumental in ensuring beneficial outcomes to development efforts. They have the capacity to

galvanize the voices of many different sectors of society and to provide a framework for local consultations and action, which add value to the development process.

71. The principles that govern partnerships between the United Nations system and civil society, especially the private sector, need to be outlined clearly. For entities of the United Nations system, these ought to be informed by the basic United Nations values of solidarity, social responsibility, international cooperation, inclusion and participation by all, as well as the empowerment of the poor. The goal should be to attain greater equality and social justice. Considerations of the profit motive and shareholder value by the private sector are not in themselves incompatible with these universal values espoused by the United Nations. The realization of those values and goals, especially the eradication of poverty and attainment of sustainable development, will lead directly to the expansion of markets and profits for the private sector. The challenge, therefore, for the United Nations system and its private sector partners, is to develop business models that incorporate the universal values and goals of the United Nations and the need for the private sector to realize profits and shareholder values. These are essentially business models that have a long-term perspective and that raise the profile of the poor, particularly in developing countries, the consumers and the environment as stakeholders in corporate decision-making to a level that is on a par with that of the shareholders.

72. The United Nations system has a crucial catalytic role in building partnerships that could provide a lasting and meaningful contribution to global development. In particular, the United Nations system has an important role to play in assisting the process of knowledge and technology transfer, especially ICT, to developing countries and countries with economies in transition. To that end, the following actions could be taken:

- Support national efforts for technological development through appropriately structured international assistance. National strategies for technological development are an important element of development strategies in developing countries. They should be targeted towards strengthening national science and technology research and development capacities and to improving the absorptive capacity for technology transfer, integration and diffusion;
- Support the recently established ICT Task Force as an institutional framework and an approach within which the identification, assessment, transfer, adaptation and post-transfer follow-up of knowledge and ICT can take place;
- Encourage partnership arrangements among chambers of commerce and other business and industry organizations in developed and developing countries in order to assist in spreading best practices, including training in technical skills and know-how, management practices and the use of new management tools, and institutional cooperation;
- Encourage the development of socially responsible business models that are cognizant of local cultures yet are in conformity with the universal values and goals of the United Nations. Such business models should incorporate a strong element of corporate social responsibility and a significant development dimension. Such business models should also address the needs of the poor and be owned by the countries and communities whose interests they seek to serve;

- Assist Governments of developing countries in establishing the necessary policy, legal and institutional frameworks that will ensure that they will be able to successfully acquire, adapt and utilize technology, especially ICT;
- In cooperation with other partners, design special programmes for the least developed countries that will enhance their capacity to benefit from knowledge and technology transfer;
- Provide assistance to civil society institutions of developing countries, especially their small and medium-sized enterprises and non-governmental organizations, in order to enable them to participate fully in partnership arrangements with the United Nations system and partners from the industrialized countries;
- Agencies of the United Nations system should ensure that the principles and approaches that govern their partnerships arrangements are in conformity with ideals and goals of the United Nations as well as its development agenda. Without imposing any rigidity in partnership agreements, agencies of the United Nations system should adhere to a common principled approach to partnership that includes the following principles: there should be a common purpose that is consistent with United Nations ideals and goals, there should be transparency, no unfair advantage should be bestowed upon any entity that is in partnership with the United Nations and the independence and neutrality of the United Nations system in general and the agency in particular should not be compromised;
- Undertake an analysis of existing partnerships in order to identify lessons learned in this area and share such lessons widely in order to enable their incorporation into any new partnerships. To this end, develop mechanisms and tools to monitor, measure and evaluate the effectiveness of knowledge and technology transfer partnership initiatives in terms of their performance, especially in relation to achieving specific socio-economic goals and targets as defined by the partners;
- Assist developing countries and regional institutions of developing countries in building local, national and regional networks of partnerships suited to the demands of their particular challenges.

#### Notes

<sup>1</sup> See *Legal Instruments Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, done at Marrakesh on 15 April 1994* (GATT secretariat publication, Sales No. GATT/1994-7).

<sup>2</sup> United Nations publication, Sales No. E.95.II.D.20.

<sup>3</sup> New York, Oxford University Press, 1998.

<sup>4</sup> Geneva, International Labour Office, 2001.