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Promoting and strengthening synergies among the three pillars

Progress report on the implementation of the provisions of the Accra Accord related to the areas of work on science, technology and innovation, and information and communication technologies

Note by the UNCTAD secretariat

Executive summary

The present report provides information on the implementation of provisions of the Accra Accord related to work on science, technology and innovation (STI), and information and communication technologies (ICTs), since the second session of the Investment, Enterprise and Development Commission. It thus deals with the areas defined in paragraphs 158–161 of the Accra Accord. The report gives examples of the impact of UNCTAD's work in relevant areas. The work is carried out, *inter alia*, in close cooperation and through joint programmes with other international, regional and national institutions active in the fields of science, technology and ICTs.

Introduction

1. Science, technology and innovation have seldom been as crucial to development as they are today. Technological advances are at the core of many contemporary phenomena, including knowledge-based societies, the network age and, regretfully, the digital divide. These phenomena have major implications for development.

2. UNCTAD's work on STI and ICTs is governed by paragraphs 158–161 of the Accra Accord. In October 2010, the Trade and Development Board expressed general satisfaction with UNCTAD's implementation of the Accra Accord to date. It also reiterated the need to continue to address persistent development challenges such as harnessing science and technology for development.[1]

3. During 2010, UNCTAD continued to assist all developing countries in its activities in science, technology and ICTs. Eighty-five developing countries or transition economies benefited from at least one of the programmes and activities in these areas of work. The programme continued to ensure a balanced geographical coverage of its services, with least developed countries (LDCs) making up 22 per cent of all beneficiaries. In 2010, the Science, Technology and ICT Branch of the Division of Technology and Logistics provided support to 19 of the 49 LDCs (39 per cent), 16 landlocked developing countries (52 per cent), and 7 small island developing States (18 per cent), especially through training.

I. Accra Accord, paragraph 158

Box 1. Accra Accord, paragraph 158

"UNCTAD should further strengthen its research and analysis in the area of science, technology and innovation, including ICTs, and should promote effective international and national policies, in collaboration with other relevant international organizations working in this area. It should also draw lessons from successful experiences with the transfer and diffusion of technology through all channels, including FDI. It should also enhance its support to the efforts by developing countries, in particular LDCs, to respond to technological changes and assess the effectiveness of domestic innovation policy. UNCTAD should help strengthen North–South and South–South cooperation in harnessing knowledge and technology for development, and assist developing countries and countries with economies in transition through science, technology and innovation policy reviews and related technical assistance. "

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4. As requested in paragraph 158 of the Accra Accord (see box 1), UNCTAD strengthened its research and policy analysis on STI and ICTs through a number of activities, including two flagship reports (the 2010 issue of its *Information Economy Report* series and the first issue of its *Technology and Innovation Report* series, for which research was conducted in 2009 but which was completed and released in 2010), and the organization of a number of expert meetings examining STI– and ICT–related issues and their impact on development.

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[1] See UNCTAD (2010). Report of the Trade and Development Board on its fifty-seventh session. TD/B/57/8: para. B 3 (i), p. 5.

5.   The *Technology and Innovation Report*[2] focused on the challenges of improving agricultural performance in Africa and the role of STI in raising agricultural production and incomes of all farmers, including smallholder farms. Much of the analysis of the *Technology and Innovation Report* is to some degree applicable to farmers in developing countries outside Africa. The report argues that the main challenge that lies ahead is one of strengthening the innovation capabilities of African agricultural systems to be able to successfully address poverty, improve food security and achieve broader economic growth and development.

6.   Noting that enhancing Africa's ability to absorb, adapt and apply technologies across sectors will be crucial to improving agricultural productivity and food security in the continent, the *Technology and Innovation Report 2010* formulated several recommendations, such as the following:

        (a)   Smallholder farmers need to be at the centre of policy so that agricultural research, development and extension services meet their real needs;

        (b)   Policymaking capacities should be strengthened to create an enabling environment for agricultural innovation, and to make possible some degree of policy experimentation;

        (c)   Agricultural innovation systems need to be reinforced by focusing on the enabling environment and linking national, regional and international research to innovation;

        (d)   It is important to target agricultural investment by putting resources into the physical and scientific infrastructure, linkages and stronger extension services;

        (e)   Local agro-ecological conditions should be taken into account so that technologies are tailored to different agro-ecological zones and include appropriate and effective mixes of low–, medium– and high–tech solutions, as well as traditional knowledge and modern science;

        (f)   Capacity–building and international cooperation on technology transfer and technology sharing should be reinforced.

7.   The *Technology and Innovation Report 2010* was presented during consultations of the President of the Trade and Development Board, where it elicited a number of positive statements from member States. A public presentation of the Report for government officials, academics and the media was also organized in Nairobi in cooperation with the United Nations Information Centres (UNIC). Videoconference presentations were given to university members of UNCTAD's Virtual Institute. UNCTAD was also invited to present the *Technology and Innovation Report 2010* to the Working Group on Trade and Transfer of Technology of the World Trade Organization, where it was commended as a timely and useful piece of research.

8.   Preparatory research was undertaken for the *Technology and Innovation Report 2011*. This Report will consider, from the technology and innovation point of view, the role of renewable energy technologies in addressing the challenge of energy poverty facing developing countries in a manner that is compatible with the objective of promoting greener catch-up processes.

9.   Research and analysis was also conducted in preparation for the third session of the Multi-year Expert Meeting on Enterprise Development Policies and Capacity-building in

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[2] UNCTAD (2010). *Technology and Innovation Report 2010.* United Nations publication. Sales No. E.09.II.D.22. New York and Geneva.

Science, Technology and Innovation (STI) (Geneva, 19–21 January 2011), which addressed the role of educational and research institutions in enhancing the STI capabilities of developing countries. The experts found that developing countries needed to strengthen their innovative capabilities in combination with scientific and technological absorptive capabilities as part of their efforts to improve productive capacity, create employment and reduce poverty. In this context, innovation would not necessarily mean developing new advanced technologies; innovating by adopting and adapting existing technologies could be a powerful way for creative firms to develop successful businesses. Experts added that STI policy should support the alignment of the STI competencies supplied by the academic sector with the demands of the productive sector. Policy should, for instance, provide incentives for educational and research institutions to develop agendas that matched more closely the requirements of domestic enterprises and local communities. In order to achieve this, experts agreed on the critical importance of a strong national system of innovation. They encouraged UNCTAD to continue to support developing countries in this area, including through research and analysis and the implementation of national STI Policy Reviews.

10.   UNCTAD organized and provided substantive servicing of the single–year Expert Meeting on the Contribution of Foreign Direct Investment to the Transfer and Diffusion of Technology and Know-how for Sustainable Development in Developing Countries, Especially Least Developed Countries (Geneva, 16–18 February 2011). One of the sessions of the meeting considered the role of national innovation systems in the facilitation of technology transfer and the improvement of the technological and innovative performance of developing countries. Discussing the comparative performance of a number of developing countries in the production of technology-intensive goods, experts pointed out that vetting, monitoring and appraisal processes for progressively eliminating policy errors and achieving technological upgrading over time were important factors that accounted for a large part of the differences in performance among countries. The existence of high-quality human capital was another aspect of central importance. Experts also referred to the existence of various channels for technology transfer in addition to foreign direct investment (FDI), all of which should receive the attention of policymakers. Experts pointed out that, for FDI to result in significant technological progress in developing countries, national absorptive capabilities were crucial and, in order to generate them, policy should aim at supporting the establishment of national innovation systems in developing countries.

11.   Two publications under the UNCTAD current studies on science, technology and innovation are under preparation. The first – *Study on Gender, Science, Technology and Sustainability* – examines the cross-cutting themes of gender, science, technology and sustainable livelihoods, with a special focus on a number of key development sectors, such as food production/agriculture, water, energy and enterprise development. It highlights good practice examples and case studies as well as identifies policies, tools and other contributing factors and strategies needed to implement, develop and up-scale successful models. The second one is entitled *Study on Water for food – Innovative water management for food security and poverty alleviation*. It examines the challenges related to agricultural water management in the context of climate change, increased demand for food production, and environmental sustainability, and reviews the potential role of technologies towards water productivity, resilience in agricultural water management and sustainable livelihood. It reviews a host of appropriate technologies and associated management practices – traditional (such as water harvesting and storage), as well as new and emerging (such as geographical information system) ones, and discusses key areas for future action to accelerate the diffusion and adoption of these technologies.

12.   In response to the mandate established in paragraph 158 of the Accra Accord, UNCTAD continued the implementation of its programme of national Science, Technology

and Innovation Policy (STIP) Reviews. The purpose of the STIP Reviews is to enable participating countries to assess the effectiveness of their policies and practices for capacity-building in STI activities and support the integration of such policies in their overall development strategies. STIP Reviews typically look at the design of STI systems, the linkages between small and medium-sized enterprises, large firms, science and technology institutions, and business associations, and the policy dialogue in the area of science, technology and innovation.

13.   In 2010, UNCTAD organized an Ad Hoc Expert Meeting on STIP Reviews, in which experts from academia and other international agencies with involvement in science, technology and innovation policy discussed the conceptual framework for the implementation of STIP Reviews in developing countries. They also discussed the ideal structure, content and the production process to maximize the long-term impact of STIP Reviews. The outcome of the discussions will contribute to a document on the methodology and guidelines for the implementation of STIP Reviews that the secretariat will prepare in 2011.

14.   Also, UNCTAD completed the STIP Review of Peru (to be published in early 2011) and fielded missions to the Dominican Republic and El Salvador. The latter two STIP Reviews are expected to be finalized in 2011.

15.   In the area of ICTs for development, the *Information Economy Report 2010: ICTs, Enterprises and Poverty Alleviation* was published in October.[3] The report was presented to journalists and other interested stakeholders via launching events in 14 cities around the world, and often in collaboration with other agencies.[4] The launching activities resulted in more than 230 news articles and several radio and television interviews given in national and international media. In addition, the report was presented at key international conferences dealing with ICT for development (ICT4D), such as the M4D Conference in Kampala, Uganda; the Euro–Africa ICT Research conference in Helsinki, Finland; ICTD 2010 in London, United Kingdom; and the ICT4All Forum in Hammamet, Tunisia.

16.   The *Information Economy Report 2010* highlighted that, for the first time, there are realistic opportunities for micro and small enterprises and entrepreneurs in low-income countries to get connected via ICTs. In particular, farmers, fishermen and urban entrepreneurs are rapidly adopting the mobile phone as a key tool to advance their commercial activities. The report also highlights that some poor people are finding new livelihoods on the back of this trend. The Report emphasizes that policymakers in developing countries as well as their development partners should seize these new opportunities to leverage ICTs and enterprise to bring tangible benefits to the poor.

17.   Against this background, the Report calls for tailored policy interventions. First, there is a need to secure affordable access to mobile telephony in those parts of low-income countries that are still not covered by a mobile signal. Secondly, the links between ICT and enterprise policies in poverty reduction and national development strategies should be strengthened. Thirdly, development partners need to stay abreast of the rapid developments taking place within ICT for development, and to ensure that the potential of ICTs is given adequate attention within their programmes. Fourthly, the Report notes that Governments

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[3] UNCTAD (2010). *Information Economy Report 2010: ICTs, Enterprises and Poverty Alleviation.* United Nations publication. Sales No. E.10.II.D.17. New York and Geneva.

[4] Geneva, Addis Ababa (with the United Nations Economic Commission for Africa (ECA)), Bangkok (with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)), Beirut (with the United Nations Economic and Social Council for Western Asia (ESCWA)), Colombo, Dhaka, The Hague, Johannesburg, Lima, Luanda, Manchester, Nairobi, São Paulo and Tunis.

and development agencies should work in partnership with the private sector and civil society. If implemented successfully, the support of governments and development partners can help ensure that ICTs in enterprises make a strong positive contribution to livelihoods and to poverty reduction. This is all the more important in view of the need to make progress with regard to the Millennium Development Goals.

18. During the last months of 2010, preparations began for the *Information Economy Report 2011*, the theme of which will be *ICTs and Private Sector Development*.

19. A Study on Prospects for Harmonizing Cyberlaws in Central America in seven countries was launched in November 2010.[5] This new publication provides a comprehensive overview of the situation in each of the countries concerned, allowing for regional comparisons.

20. In response to the reference in paragraph 158 of the Accra Accord to South–South cooperation in the context of STI (see box 1), work continued during 2010 with UNCTAD's Network of Centres of Excellence, a programme targeted at building capacity in the scientific community in developing countries, particularly in Africa, through South–South cooperation. The network leverages leading scientific and technological institutions in developing countries for training courses for developing country scientists. UNCTAD's Network of Centres of Excellence (NOCE), which targets capacity–building in Africa specifically, has to date held 11 training sessions. In 2010, the project included a training session on cybersecurity in Tunis, Tunisia, with participants from African countries benefiting from skills upgrading on cybersecurity issues through the session.

21. UNCTAD also contributed to the United Nations Economic Commission for Africa (ECA) expert group meeting on "Harnessing knowledge to achieve the Millennium Development Goals" in November 2010, providing an overview of its experience with STI in African countries based mainly on the five STIP Reviews that UNCTAD has prepared for African countries to date (including Ethiopia and Angola).

II. Accra Accord, paragraph 159

Box 2. Accra Accord, paragraph 159

"UNCTAD should also contribute to consensus-building in the international debate on science and technology for development, including ICTs and their implications for development, and continue to provide support as the secretariat to the Commission on Science and Technology for Development. UNCTAD should continue to help developing countries to participate effectively in international discussions on technology transfer and knowledge-sharing, and to identify policy options and best practice in this area. UNCTAD should furthermore continue to assist developing countries in identifying ways and means to operationalize technology transfer clauses in international agreements and in the outcomes of major United Nations conferences and summits in order to maximize their potential benefits."

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22. In line with the request in paragraph 159 of the Accra Accord (see box 2), UNCTAD made several contributions to consensus-building in the international debate related to STI and ICTs. As the secretariat for the Commission on Science and Technology for

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[5] UNCTAD (2010). Study on Prospects for Harmonizing Cyberlaws in Central America. United Nations publication. UNCTAD/DTL/STICT/2009/3. New York and Geneva.

Development (CSTD), UNCTAD provided substantive and technical servicing to the thirteenth session of the CSTD, which took place in May 2010.[6] Among other things, the CSTD considered two priority themes:

(a) Improvements and innovations in existing financing mechanisms: information and communication technology for development; and

(b) New and emerging technologies: renewable energy for development.

23. As a contribution to the Economic and Social Council's Annual Ministerial Review theme for 2010 on "Implementing the internationally agreed goals and commitments in regard to gender equality and empowerment of women", a special panel discussion was devoted to "Gender and science and technology". The session included a ministerial segment, in which more than 15 Member States were represented at the ministerial level. Participants also included heads of organizations of the United Nations system or their representatives, representatives of the Council of Europe and the African Union, and representatives of civil society and of business entities.

24. The CSTD recommended to the Economic and Social Council a draft resolution on "Science and Technology for Development", containing calls for action to national governments and the international community.[7] Participants furthermore identified some of the main impediments that developing countries face in accessing the new technologies and called upon all stakeholders to provide adequate resources and to support efforts aimed at capacity-building and the transfer of technology to developing countries, particularly the least developed countries. Also highlighted was the need for the building of local innovative capabilities. Governments were encouraged to provide an enabling environment which would encourage private and public sector initiatives in the generation and dissemination of renewable energy technologies. Participants expressed their concern with a widening gap in broadband connectivity, which affects many economically and socially relevant e-applications. In this context, they commended current initiatives aimed at achieving rapid broadband deployment and underscored the need to prioritize innovative approaches within national and regional development strategies.

25. UNCTAD organized the Inter-sessional Panel of the CSTD on 15–17 December in Geneva. The Panel provided an opportunity to study the various issues related to the priority themes which will be considered at the CSTD's fourteenth annual session, including technologies to address challenges in areas such as agriculture and water, and measuring the impact of ICTs for development. In this context, panellists highlighted the need for the strengthening of agricultural innovation systems, with a view to addressing some of the special challenges that face small-holder farmers. The report of the Inter-sessional Panel will be made available to the fourteenth session of the CSTD, 23–27 May 2011.

26. UNCTAD provided substantive support to the sixty-fifth session of the General Assembly under the agenda item on Information and Communication Technologies for Development.[8] The United Nations General Assembly adopted a resolution under this agenda item.[9]

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[6] UNCTAD prepared reports of the Secretary-General on the priority themes (E/CN.16/2010/3 and E/CN.16/2010/4).

[7] See Economic and Social Council Resolution E/2009/8.

[8] UNCTAD prepared reports of the Secretary-General on the agenda item (A/65/64).

[9] See A/RES/65/141.

III. Accra Accord, paragraph 160

Box 3. Accra Accord, paragraph 160

"UNCTAD should continue to provide technical assistance to countries in the area of ICT, notably on ICT policy reviews, pro-poor policies, legal and regulatory frameworks, and measuring the information economy, including through the Partnership on Measuring ICT for Development launched at UNCTAD XI."

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27.   Along the lines of paragraph 160 of the Accra Accord (see box 3), UNCTAD continued to provide technical assistance to countries in the area of ICT, in response to strong demand in 2010. Its technical assistance activities in this field reached all developing-country regions, and relied mainly on extrabudgetary support from the Governments of Finland, France and Spain.

28.   In order to seize the development opportunities created by ICT, effective legal and regulatory frameworks are essential. In 2010, UNCTAD's technical assistance activities in this field aimed primarily at facilitating increased regional harmonization of cyberlegislation, with projects in Africa, Asia and Latin America.

29.   In Africa, as part of the assistance provided for the harmonization of cyberlaws in the five Partner States of the East African Community (EAC), a regional meeting of the EAC Task Force on cyberlaws was organized in Kigali, Rwanda, in June 2010 with the support of the EAC secretariat. The meeting took stock of progress made by the EAC Partner States in the preparation of cyberlaws and welcomed the adoption by the EAC Sectoral Council of Ministers on Transport, Communications, and Meteorology in May 2010 of the EAC Legal Framework for Cyberlaws (phase I).

30.   As adopted, the framework constitutes a directive and through it the five partner States – Burundi, Kenya, Rwanda, the United Republic of Tanzania, and Uganda – committed to enact cyberlaws that will be harmonized and effective across the region. The States consider the adoption of harmonized cyberlaws critical for implementing e-government services effectively, and for increasing regional and foreign trade and investment.

31.   In Latin America and the Caribbean, the distance learning course on Legal Aspects of e-Commerce was delivered using the TrainForTrade platform for participants from 19 Latin American and Caribbean Economic System (SELA) member countries. A face-to-face delivery of the course was to follow up in February 2011 to allow practical discussion about ways of further harmonization in the region.

32.   In Asia, advances have been made in both Cambodia and the Lao People's Democratic Republic with regard to the discussion and approval of the draft e-commerce laws. However, there is still a need to strengthen national capacity to ensure that the e-commerce laws are adopted.

33.   UNCTAD continued to receive new requests for technical assistance in this field in 2010, including from Madagascar, Burkina Faso and Niger. In addition, UNCTAD was invited by the United Nations Commission on International Trade Law (UNCITRAL) to be associated to the work on online dispute resolution mechanisms. Moreover, following UNCTAD's participation in the Organization for Economic Cooperation and Development Conference Empowering E-Consumers organized in 2009, UNCTAD will continue to participate in the revision process to relay the concerns developing countries face in some of these areas. In December 2010, an external evaluation of UNCTAD's programme on ICT and Law Reform was launched. It should be completed during the first half of 2011.

34.   The *ICT Policy Review* of Egypt was completed in 2010 and was to be presented officially in the first quarter of 2011.

35.   In the area of measuring the information economy, UNCTAD continued to support member States' efforts to improve the availability of ICT statistics, especially with regard to ICT use by the business sector and to the ICT sector. Without access to reliable data, policymakers are at a disadvantage when formulating, implementing and evaluating their policies. In most developing countries, however, there is still a serious lack of reliable data in this area. The work programme and related technical assistance to countries on ICT measurement will need additional funding to respond to growing demand for assistance and to further develop methodological work on information economy statistics.

36.   During 2010, UNCTAD organized, in collaboration with ECA, a regional training course for French-speaking African countries. Compared with the previous years, fewer training courses were held. The work in the area of measuring ICT will need additional funding, especially to continue to develop the areas of ICT statistics for which UNCTAD is responsible, and to build capacity regarding the collection and analysis of internationally comparable ICT statistics.

37.   The revised edition of the UNCTAD Manual for the Production of Statistics on the Information Economy was translated into Arabic by ESCWA and into Spanish by the Economic Commission for Latin America and the Caribbean (ECLAC).

38.   UNCTAD continued to collaborate with other parts of the United Nations system involved in measuring ICT. In July 2010, UNCTAD co-organized an international seminar together with the United Nations Statistics Division, International Telecommunication Union (ITU), the Government of the Republic of Korea and the Partnership on Measuring ICT for Development. UNCTAD also contributed to the First Workshop, an interregional meeting on Advancing ICT Measurement in the Arab-speaking Region in Amman in September 2010. In addition, the work on measuring ICT was also addressed in the context of several other international meetings in New York (United Nations Statistical Commission), Paris (WPIIS meeting) and Geneva (WSIS Forum, World Telecommunication/ICT Indicators Meeting).

IV.   Accra Accord, paragraph 161

Box 4. Accra Accord, paragraph 161

"UNCTAD should contribute to the implementation of the World Summit on the Information Society (WSIS) action lines on capacity-building, an enabling environment, e-business and e-science, in cooperation with other relevant international organizations. UNCTAD, also in its capacity as secretariat to the Commission on Science and Technology for Development, should assist the Commission in implementing its mandate on the follow-up to the WSIS outcomes."

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39.   As requested in the Accra Accord paragraph 161, particular attention has also been paid by UNCTAD to the implementation of the World Summit on the Information Society (WSIS) (see box 4). In the area of measuring the information society, UNCTAD continued to play a leading role in the context of the Partnership on Measuring ICT for Development. UNCTAD was in 2010 elected to serve another two-year term on its Steering Committee. The Partnership's work on information society statistics contributes to assessing progress towards the achievement of the WSIS goals.

40. Also in the context of WSIS, UNCTAD co-organized the *WSIS Forum 2010* with the ITU and UNESCO in May 2010. During the Forum, delegates from around 50 countries contributed to debates in a spirit of constructive multi-stakeholder partnership. UNCTAD played an active role in the preparation of the Forum. UNCTAD staff members were responsible for organizing the Action Line Facilitation on e-Business, jointly with the Food and Agriculture Organization of the United Nations (FAO), and a session on Measuring ICT for Development (in cooperation with other members of the Partnership).

41. During the WSIS Forum 2010, a meeting of the United Nations Group in the Information Society (UNGIS) was held at ITU headquarters. UNCTAD serves as one of the vice-chairs. During 2010, UNCTAD contributed to the inter-agency coordination of UNGIS and prepared a mapping of current STI-related capacity-building initiatives among United Nations agencies as an input for consideration by HLCP.

42. During the thirteenth session of the CSTD, the Commission reviewed progress made in the implementation of the outcomes of the WSIS.[10] It recommended to the Economic and Social Council a draft resolution on "Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society", containing calls for action to national governments and the international community. Participants expressed their concern with a widening gap in broadband connectivity, which affects many economically and socially relevant e-applications. In this context, they commended current initiatives aimed at achieving rapid broadband deployment and underscored the need to prioritize innovative approaches within national and regional development strategies. The same resolution also asked the Chair of the CSTD to set up a working group to "seek, compile and review inputs from all Member States and all other stakeholders" on improvements to the Internet Governance Forum, and report to the Commission at its fourteenth session and the GA, through Economic and Social Council in 2011.

43. At the Inter-sessional Panel of the CSTD on 15–17 December in Geneva, participants also discussed progress made in the implementation of and follow-up to the outcomes of the WSIS at the international and regional levels. They encouraged furthering the understanding of the impacts of ICTs in developing country contexts, and called for joint efforts at the international level, to develop practical guidelines, methodologies and indicators. Additionally, the panel decided on the composition of the Working Group on improvements to the Internet Governance Forum (IGF), which the Economic and Social Council and the General Assembly[11] requested the Chair of the CSTD to set up.

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[10] UNCTAD prepared a report of the Secretary-General on the Assessment of the progress made in the implementation of and follow-up to the outcomes of the WSIS (E/CN.16/2010/12).

[11] E/2010/2, and A/65/141,