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Submissions from entities in the United Nations system and elsewhere on their efforts in 2011 to implement the outcome of the WSIS

Submission by

ESCWA

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 15th session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

**ESCWA's Contribution to the 2012 Annual Report of the
United Nations Secretary-General to the Commission on Science and Technology on the
Implementation of and Follow-up to the Outcomes of the World Summit on the Information Society**

I. Introduction

2011 was the year during which many countries of the ESCWA region grabbed the attention of the world community. For most of the year, international news headlines focused on events related to what has come to be known as the Arab Spring. ESCWA member countries (EMCs) that underwent major social upheavals and/or political changes during the year include Egypt, Syria, Yemen and Bahrain. The Arab Awakening, a lesser known appellation of the same occurrences, did not spare the citizens and regimes of other EMCs but failed to produce results as significant as the ones achieved in the aforementioned countries.

The civil, social and political unrest in the ESCWA region, a constant throughout the year, has had a significant impact on the economies of the region. Public demonstrations, work stoppages and other forms of civil disobedience have reduced the number of working hours in the urban agglomerations where many of the actions have taken place, obvious examples being Cairo, Sana'a and Manama. It may be too early to tally the impact of economic sanctions imposed on Syria by Turkey, the Arab League and many Western countries, but side effects would include the slowing down and eventual stoppage of foreign investments and the flight of capital. Due to a decrease of cross-border trade, ESCWA countries bordering Syria, namely Iraq, Jordan and Lebanon, see those same sanctions as another obstacle standing in the way of their economic growth. In an increasingly globalized world, the economies of EMCs less affected by the Arab Spring, including those of oil-rich countries, won't escape unscathed given the fact that many of these countries had poured monies into the economies of countries currently in turmoil. Finally, one cannot ignore the economic ramifications of a 2011 vote that brought about the division of Sudan into two political entities.

The bleak economic outlook of some EMCs must not prejudice the reader of this report into thinking that the progression towards an information society in the region has taken a step backwards. If one ignores the economic and focuses on the political and cultural aspects, then, paradoxically, it is possible to look at the Arab Spring from a narrower perspective that points towards the advancement of the information society in the region. Throughout 2011, articles, studies and debates on the impact of social media on the Arab Spring were common[1,2,3]. Regardless of where one stands on the issue, one cannot ignore figures that show a continuous growth in the number of users of information society tools in the countries that were most associated with the Arab Spring. As an example of the growing importance of information society tools, citizens who no longer trusted the controlled media outlets of their governments resorted increasingly to getting their news from independent sources on the Internet[4]. One cannot also ignore the growing importance of mobile phones and social media outlets which have been used increasingly by citizens and activists to communicate ideas that are controversial to rulers and to organize impromptu political gatherings. Perhaps one of the lessons to be learned from the Arab Spring by researchers and academics is that various aspects of the information society, namely economic, political and cultural may move independently and in opposite directions.

II. Regional Follow-up of the World Summit on the Information Society

During 2011, ESCWA produced a new edition of the Regional Profile of the Information Society in Western Asia (RPIS)[5]. The 2011 edition is the fifth in a series of publications which started in 2003 and

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1 http://www.dsg.ae/PUBLICATIONS/PublicationDetail.aspx?udt_826_param_detail=3179
2 http://www.huffingtonpost.com/raymond-schillinger/arab-spring-social-media_b_970165.html
3 http://www.collegian.psu.edu/archive/2011/10/27/debaters_square_off.aspx
4 http://www.dsg.ae/portals/0/ASMR2.pdf
5 http://www.escwa.un.org/information/publications/edit/upload/E_ESCWA_ICTD_11_4_e.pdf

was subsequently issued in 2005, 2007 and 2009. The RPIS falls within the framework of follow-up activities to the outcome of the World Summit on the Information Society (WSIS). It examines the status of implementation of information societies in various EMCs, measures the progress made in building such societies and compares the performance of the region with that of other regions and the rest of the world. The various aspects of the information society profiled in the RPIS use WSIS action lines as a basis and are supplemented with coverage of related topics that are of special interest to the ESCWA region. The 2011 RPIS concluded that the outlook for the implementation of information societies in Western Asia is hopeful, that the rates of ICT adoption and use are higher than they were in 2005, that costs are comparatively lower and that governments and other stakeholders are paying closer attention to the ICT sector. Some of the recommendations made in the 2011 RPIS have been incorporated in this document (refer to section VI entitled Suggestions and Recommendations)[6].

ESCWA also uses the Information Society Portal for the ESCWA Region (ISPER)[7] as a supplemental tool to track the progress of the implementation of WSIS outcomes in the region. ISPER is a dynamic, bilingual (English/Arabic), database-driven, open-source application which contains updated versions of the Regional and National Profiles of the Information Society as well as sections dealing with various information society topics. The portal also provides real-time discussion forums to WSIS stakeholders and is connected to the ESCWA Statistical Information System (ESIS) which allows users to search for statistics related to the implementation of WSIS in the region. The ISPER team is currently working on the development of the fourth iteration of the Website which will include added functionality and increased flexibility.

III. Action Lines

C1: The role of governments and all stakeholders in the promotion of ICTs for development

While growing at a healthy pace during the last few years, the ICT sector in the ESCWA region remains underdeveloped, especially when compared to the ICT sector of countries with well-established knowledge economies. The public and private sectors in most countries of the region are mere consumers of existing technologies instead of being creators and innovators. During 2011, ESCWA published a study entitled "Promoting the ICT Sector to Meet the Challenges of the Knowledge Economy"[8]. The study:

- Reviewed the status of the ICT sector in the region, including obstacles and challenges that the ICT sector is facing in the current economic situation;
- Assessed the role of governments and pinpointed the gaps hindering the building of needed enabling environments;
- Identified the socio-economic priorities related of the ICT sector in the ESCWA region;
- Proposed actions to increase the contribution of the ICT sector to the socio-economic development of EMCs;
- Presented case studies from selected EMCs with regard to the contribution of the ICT sector to economic growth; and
- Highlighted methodologies and indicators to measure the contribution of the ICT sector in national economies.

A related follow-up activity took place during May 2011. A workshop entitled "Promoting and Benchmarking the ICT Sector in the ESCWA Region"[9] was held at the UN-House in Beirut, Lebanon. It aimed at creating awareness of the solutions for the development of a more productive ICT sector in the ESCWA region and presented an opportunity for participants to contribute to the enhancement of the

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[6] Readers of this report, which is limited in scope and details by its length, should refer to the online edition of the 2011 RPIS for an in-depth analysis of the status of the information society in the ESCWA region.

[7] http://isper.escwa.org.lb

[8] http://css.escwa.org.lb/ICTD/1433/10a.pdf

[9] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1433E

above-mentioned study. The event also sought to build the capacity of member states to benchmark the ICT sector and to conceive policies, mechanisms and modalities related to the impact of the sector on socio-economic development. The topics covered in the event included: (a) the status of the ICT sector and its contribution to national and regional economies; (b) benchmarking the ICT sector; (c) the challenges and priorities of the sector; (d) smooth transitions to knowledge economies; and (e) a vision for the ICT sector in the region.

C4: Capacity building

ESCWA member countries need to acquire the tools and capabilities necessary to accelerate socio-economic development in order to attain technological parity with the developed nations and regions of the world and to convert their economies into ones that are based on scientific and technological knowledge. Recognizing the role that science, technology and innovation (STI) can play in the development of the economies of the region, ESCWA established in 2010 the ESCWA Technology Centre (ETC)[10]. Situated in Amman, ETC contributes to the strengthening of national STI systems, develops the capabilities of EMCs in problem solving and policy formulation and fosters synergy and complementarity at the regional level in the application of technology.

In carrying out its mandate during 2011, ETC implemented several capacity building initiatives. In April and again in October, ETC organized, in cooperation with the Royal Scientific Society in Jordan and the Federation of Chambers in Lebanon, two meetings on the "Promotion of South-South Cooperation in Technology Transfer"[11]. Participants discussed priority areas of cooperation in technology transfer and shared best practices and successful case studies of matters related to water, energy, agriculture, information, communication manufacturing, construction, technological innovation and technology for education.

ETC also organized during September 2011, in cooperation with the Institute of Physics, Lebanon's National Council for Scientific Research and the Lebanese Industrial Research Achievements Program, a workshop entitled "Entrepreneurship for Scientists and Engineers"[12]. The workshop was hosted by Berytech Technological Pole in Beirut and attracted participants from universities and small and medium enterprises. It aimed at introducing scientists and engineers to the process of innovation, generation and protection of intellectual property, technology transfer and commercialization of inventions. The three-day event included lectures by invited speakers, panel discussions and group activities. Discussions focused on scientists and engineers as inventors and entrepreneurs, technology transfer, the concept of intellectual property, basics of patenting, innovation tools and decision-making for start-up companies.

During November 2011, and in cooperation with the World Intellectual Property Organization (WIPO) and the UNESCO office in Amman, ETC organized a "Workshop on Intellectual Property (IP) and Technology Transfer for Universities and Research Institutions"[13]. The workshop aimed at enhancing and strengthening the capacities of the region's policymakers in matters related to the development, ownership, management, strategic use and commercialization of intellectual property and technology transfer.

C6: Enabling environment

Underdeveloped legal and regulatory environments represent a serious obstacle to the development of the information society in Western Asia. Laws and regulations relating to intellectual property rights (IPRs), independent regulatory bodies for the ICT sector and cyber legislations remain underdeveloped. Over the past few years, ESCWA has worked to narrow the gap between the region it serves and the developed world by helping member countries improve their legislative and regulatory frameworks.

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[10] http://www.escwa.un.org/divisions/ictd/etc/main.asp

[11] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1441E

[12] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1646E

[13] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1674E

Taking into consideration the recommendations of regional legal experts, ESCWA launched in 2009 a project entitled "Regional Harmonisation of Cyber Legislation to Promote the Knowledge Society in the Arab World."[14] The project aims at bridging regional legislative gaps in ESCWA countries, preventing the illicit and illegal use of cyberspace and at mapping out a course of action that will foster the creation of a harmonious legislative enabling environment in the region. During 2011, ESCWA carried out several activities that are related to the project. These included:

- The "Expert Group Meeting (EGM) on the Regional Harmonization of Cyber Legislation"[15], which aimed at promoting the advantages of the harmonization of cyber legislation across the Arab region. This EGM acted as an open forum for participants and allowed them to review, discuss, evaluate and propose improvements to six directives proposed for the harmonization of cyber legislation covering the following areas: personal data protection, e-communication, e-signature and e-transactions, e-commerce and consumer protection, intellectual property rights and cybercrime. During this EGM, ESCWA proposed the establishment of a regional network of experts and institutions working on cyber legislation in the region.

- The "Workshop on ESCWA Directives for the Regional Harmonization of Cyber Legislation in the Arab Region"[16], which aimed at building the capacities of legislators on the application of the ESCWA Cyber Legislation Directives in the formulation of national cyber laws, the review and adjustment of existing ones and at promoting the advantages of cyber legislation harmonization across the Arab region. The main recommendations agreed on during the workshop were: (a) the importance of the ESCWA Cyber Legislation Directives and the need to consider them a main point of reference for legislators involved in regulating, protecting and securing cyber space; (b) the importance of raising awareness on the directives and arranging specialized workshops on their use; (c) the role of ESCWA, with emphasis on collaboration with regional and international organizations including the League of Arab States; (d) the need to maintain sustainability for the project's future activities and beyond the lifetime of the project; and (e) the importance of promoting the ESCWA Cyber Legislation Directives to decision-makers.

- Participation by ESCWA staff members in international events to promote the project and raise awareness on the importance of cyber legislation. Events have included the 5th International Conference on Theory and Practice of Economic Governance (Tallinn, September 2011)[17], the Second Gulf Cooperation Council e-Government Awards and Conference (Kuwait, November 2011)[18], Arab Women and ICT Summit (Rabat, December 2011)[19] and Arab Industrial and Information Networks Conference (Rabat, December 2011)[20].

C7: ICT applications and C8: Cultural diversity and identity, linguistic diversity and local content

Arabic speakers constitute 5 percent of the world's population but the number of Arabic Websites and Web pages in the Arabic language is still below expectations. ESCWA is committed to ensuring linguistic and cultural diversity in the digital environment. In this respect, it organized during March of 2011 an expert group meeting entitled "EGM on Enabling Environment for the Development of Arabic e-Services"[21]. The EGM examined the factors that should be available to promote an enabling environment for Arabic e-services. It reviewed key strengths, weaknesses and opportunities facing the region. The EGM

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[14] http://isper.escwa.un.org/FocusAreas/CyberLegislation/tabid/157/language/en-US/Default.aspx

[15] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1427E

[16] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1439E

[17] http://www.icegov2011.icegov.org/

[18] http://egcc-kw-award.info/default.aspx

[19] http://events.idc-cema.com/eng/events/48105-arab-women-summit/7-overview

[20] http://www.aidmo.org/aiinc4/index.php?option=com_content&view=article&id=3&Itemid=9&lang=en

[21] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1429E

provided a platform for participants to share their experiences and best practices, discuss the requirements for catalyzing an enabling environment for the development of e-services in Arabic, identify the major challenges facing the promotion of an enabling environment, and raise awareness on the role that native languages can play in socio-economic development.

The EGM included the delivery and discussion of a study prepared by an ESCWA consultant on standardization in selected e-services, namely e-government and e-commerce. The recommendations made focused on the needs, opportunities and requirements for the infrastructure, regulatory framework, Arabic content, user trust in e-services and the use of open and interoperable standards.

C11: International and regional cooperation

Many of the above-mentioned ESCWA initiatives were carried out in partnership with international and regional organizations. Collaborative efforts are coordinated primarily with the governments of ESCWA countries, non-governmental organizations, a host of stakeholders from the private sector, other United Nations Regional Commissions, UN specialized agencies and programmes and the League of Arab States.

IV. Main Themes

MT1: Internet governance

Since 2003, ESCWA has been working on several Internet governance initiatives including the establishment of an Arabic Domain Names System (ADNS)[22], the development of a Roadmap for Internet Governance in Western Asia[23] and the establishment of an Arab Internet Governance Forum. Most activities have been carried out in partnership with the League of Arab States (LAS) and the International Telecommunications Union (ITU), and in support of the LAS Arab Working Group on Domain Names and Internet Issues (AWGDNII). A recent activity involved efforts to acquire the Arab Top Level Domain (TLD) ".arab" and its IDN equivalent in Arabic "عرب.", as well as the formation of the associated Arab TLDs Registry.

During July 2011, ESCWA and LAS co-organized an event entitled "Partnership Building Forum for the Implementation of the Arab TLDs ".arab" & "عرب."[24]. The forum was carried out in cooperation with the International Telecommunications Union (ITU) and is hosted by the Egypt-based National Telecommunications Regulatory Authority (NTRA). The objectives of the forum were to:

- Find prospective partners for the Arab TLDs Registry;

- Enhance awareness of the importance of the domain name industry and of the regional strategic opportunity posed by the Arab TLDs Registry;

- Engage potential collaborators from the registry, marketing and funding/investment domains;

- Build related capacities among Internet-related business entities in the region, such as Internet Service Providers (ISPs), registry operators, registrars, and ccTLD managers.

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[22] http://www.escwa.un.org/information/pubaction.asp?PubID=1011

[23] http://www.escwa.un.org/information/pubaction.asp?PubID=1021

[24] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1620E

MT3: Measuring the Information Society

In accordance with the goals of WSIS to more effectively measure the information society, ESCWA carried out during 2011 two related activities. The first was entitled "EGM on Standardizing Information Society Measurements in the ESCWA Region"[25]. Its main objective was to examine the data collection methodologies and measurement models presently available to the ESCWA region, with particular emphasis on regional and trans-national comparability. Participants identified difficulties in accurately representing context-sensitive, real-world conditions in a measurement model which can be applied at the global, regional and national levels.

A related activity was a workshop entitled "Standardizing Information Society Measurement Models in the ESCWA Region"[26]. Its main objective was to examine information society measurement models presently available to the ESCWA region with emphasis on the standardization and normalization of methodologies. Participants discussed possible improvements to the currently established measurement models in order to achieve better benchmarking between ESCWA member countries and enhance region-to-region comparability.

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V. Suggestions and Recommendations

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Carrying through the suggestions and recommendations listed below will improve the chances of EMCs establishing an equitable information society and meeting the goals and targets set during the two phases of WSIS. Note that recommendations and suggestions have been grouped by action line.

C1. Role of public governance authorities and all stakeholders in the promotion of ICTs for development

- Allocate the funds necessary for the implementation of ICT strategies and revise them periodically in accordance with regularly updated information society indicators and in line with national needs and evolving economic outlooks;

- Entice governments to measure the economic impact of ICT by bolstering the bodies and mechanisms necessary for data collection, measurement and analysis, particularly comparative analysis between urban and rural/remote areas.

C2. Information and communication infrastructure

- Accelerate the implementation of ICT infrastructure projects, especially for broadband technologies, and reduce Internet-subscription costs to a level that would be affordable to a wider section of the community.

C3. Access to information and knowledge

- Encourage the development of new telecommunication technologies, especially wireless, in order to bridge the digital divide between urban and rural/remote areas, particularly when the deployment of fixed lines is not economically feasible.

C4. Capacity Building

- Invest in teacher-training programmes aimed at encouraging the use of technology in education and ensuring that it is ubiquitous in classrooms.

- Promote the use of open-source software and collaborate with national, regional and international organizations working to address limitations facing the adoption of open source in the region;

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[25] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1546E
[26] http://www.escwa.un.org/information/meetingdetails.asp?referenceNum=1712E

- Adopt and implement policies that promote research and development and that provide the environment necessary to encourage thinkers and researchers not to emigrate towards more developed countries;

- Build a knowledge-based culture by instilling awareness of the developmental role of new and traditional knowledge and by training communities on how to gather, create, store, share and use data, information and knowledge which would enhance their quality of life and help them become active players in knowledge-based economies.

C5. Building confidence and security in the use of ICTs

- Outline standards and adopt innovative methodologies aimed at developing safe and reliable e-services and applications that would be resilient to external risks and threats and that would include the mechanisms necessary to maintain the privacy and confidentiality of personal information;

- Encourage cooperation between the public and private sectors on matters related to the protection and security of networks and information systems;

- Raise the awareness of public sector workers, business owners, adults and children on protection mechanisms available for the digital environment and on the safe, secure and ethical interaction in cyberspace.

C6. Enabling environment

- Develop and implement comprehensive cyber legislations covering topics related to cyberspace, in particular those related to cybercrime, privacy and confidentiality of personal information;

- Harmonize cyber legislations in the ESCWA region in order to improve regional integration and to promote intra-regional e-transactions and e-commerce;

- Accelerate the process of signing, ratifying and joining international agreements on IPR and ensure their synergy with national laws;

- Create venture capital and investment funds to support the creation of start-ups and SMEs in the ICT sector and encourage national and foreign investment in the ICT sector.

C7. ICT applications

- Maximize the benefits of ICT applications by working towards increasing the level of ICT literacy in the general population with media campaigns and capacity-building measures.

C8. Cultural diversity and identity, linguistic diversity and local content

- Support the incubation of DAC (digital Arabic content) applications, including those for mobile devices and tablet computers.

C9. Media

- Reduce legal and legislative constraints on mass media, remove censorship and promote freedom of expression;

- Enhance radio and television signals to enable people in rural and remote areas equal access to those living in urban areas, and encourage the production of cultural and educational programmes.