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ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

ARAB REGIONAL ROADMAP FOR INTERNET GOVERNANCE: FRAMEWORK, PRINCIPLES AND OBJECTIVES

United Nations New York, 2010

Preface

Five global events held by the Internet Governance Forum (IGF) have shown it to be a suitable discussion medium wherein all stakeholders can exchange expertise and plan the way forward. At the fifth IGF held in September 2010, consensus was reached on the need to renew the mandate for five more years. Despite its non-binding nature, the IGF has been an important pillar in the policymaking process of Internet governance and has provided an opportunity for cooperation between different stakeholders. General Assembly resolution A/RES/64/187, on information and communication technologies for development, justifies the need for renewing the IGF mandate for five more years.

In order to ensure appropriate participation and positioning of the Arab region in the Internet governance arena, Arab countries need to make far-reaching commitments and develop policy measures. There is, thus, a need for a shared regional vision of Internet governance and a shared understanding which can aid these countries transform the threats and challenges of the Internet into opportunities for development.

The Arab Regional Roadmap for Internet Governance was envisioned by the Economic and Social Commission for Western Asia (ESCWA) to fulfil this need, by presenting a clear strategic framework for tackling Internet governance matters from a regional perspective. It is the result of multi-stakeholder involvement, including ESCWA and the League of Arab States as regional organizations, governments, the private sector and civil society. During 2010, the Roadmap developed through several stages, advancing from one version to another through this involvement. It was first posted online for public viewing and commenting during August 2010 and then presented at IGF-V. The Roadmap was finally discussed and deliberated in detail at the Expert Group Meeting on the Regional Roadmap for Internet Governance (25-26 October 2010) that was held at the United Nations House in collaboration with the League of Arab States, and was formally adopted by its participants and included as a key item in the Call of Arab Stakeholders that the group formulated and launched.²

¹ Information Society Portal for the ESCWA Region (ISPER). Available at: http://isper.escwa.un.org/InternetGovernance/tabid/153/language/en-US/Default.aspx.

² The Call of Arab Stakeholders is available in Arabic at: http://css.escwa.org.lb/ictd/1301/16.pdf.

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I. INTRODUCTION

A. BACKGROUND

The World Summit on the Information Society (WSIS) was organized by the United Nations in two phases: the first in Geneva in 2003 and the second in Tunis in 2005. The main objective of the WSIS was to develop a common vision and understanding of the information society and to develop a plan of action for closing the digital divide between developed and developing countries.

The WSIS was a unique opportunity that brought together key players from Government, civil society, and international and regional organizations to discuss and shape the information society and address central issues for its formation related to policymaking, socio-economic development and cultural, ethical and technological concerns.

Nonetheless, the first phase of WSIS did not resolve more controversial issues, such as Internet governance. Accordingly, following the initial meeting, a Working Group on Internet Governance (WGIG) was formed by the United Nations to plan how to proceed with relevant issues prior to the second phase. As a result of the WSIS second phase, and in order to address the complexities that Internet governance involves, the United Nations Secretary General launched a five-year process, from 2006 until 2010, to annually convene an Internet Governance Forum (IGF).

Realizing the importance of seizing the opportunity that the IGF presents, the Information and Communication Technology Division (ICTD) of ESCWA became involved in the IGF process from its inception. Its most recent publication on the subject was entitled "Internet Governance: Challenges and Opportunities for the ESCWA Member Countries". Published in 2009, the study provides an analytical description of the current situation of Internet governance and the role of involved parties. It elaborates areas that are of most concern to the Arab region and provides relevant guidance for addressing related issues through a set of recommendations, thus making an important contribution to the proceedings of the fourth IGF by compiling the views of a wide array of stakeholders.

B. THE INTERNET GOVERNANCE FORUM: AN OVERVIEW

Internet Governance is defined as the "development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet". The IGF was conceived as an open, transparent and inclusive platform for dialogue by all stakeholders. Five IGFs have convened thus far (see table below for dates and venues). For each, a set of themes and subjects was identified for discussion. The most general and pressing subjects were discussed during the first two IGFs; discussions focused on more detailed topics during the last three. Table 1 lists the main themes discussed during the IGFs.

Internet Governance issues are difficult to analyse, discuss and manage because of their complexity and the various approaches of different actors who may be part of the solution. According to consultations pertaining to the IGF, Internet governance issues were first classified into four different themes as shown in the table below: access, diversity, openness and security. However, since 2006, the IGF has evolved, generating feedback every year in a self-reflective process. As a consequence, the original themes proposed in 2006 have developed, intermixed and divided into a new set of topics to think about: managing critical Internet resources (CIR); security, openness and privacy; access and diversity; Internet governance for development; and cloud computing. These were the main themes of discussion at IGF-V, with the last two being new subjects introduced on the agenda.

³ Internet Governance: Challenges and Opportunities for the ESCWA Member Countries (E/ESCWA/ICTD/2009/7).

⁴ United Nations, Report of the Working Group on Internet Governance, 2005, para. 10.

TABLE 1. INTERNET GOVERNANCE FORUM DISCUSSION TOPICS

IGF-I	IGF-II	IGF-III	IGF-IV	IGF-V
Athens,	Rio de Janeiro,	Hyderabad,	Sharm el Sheikh,	Vilnius,
2006	2007	2008	2009	2010
Access Diversity Openness Security	 Access Diversity Openness Security Critical Internet resources 	Reaching the next billion Promoting cyber-security and trust Managing critical Internet resources	 Managing critical Internet resources Security, openness and privacy Access and diversity Internet governance in the light of WSIS principles Taking stock and the way forward – on the desirability of the continuation of the forum Emerging issues: impact of social networks 	 Managing critical Internet resources Security, openness and privacy Access and diversity Internet governance for development Cloud computing

Most of these issues are considered of priority for the Arab region. As to other developing countries and regions of the world, the IGF process is an opportunity for the Arab region to share ideas and foster the Internet's stability, security and development. Although non-binding in nature, it is a medium that influences the policymaking process of Internet governance. However, the least-developed countries have been left out of IGF debates because of various social, economic and political disparities. As a result, custom-made regional meetings are seen as one solution that would serve their interest. Strong support for organizing regional IGFs was witnessed during the participation of the IGF secretariat in open consultations held in February 2008. It was also a chance to announce the first regional East African IGF organized in Kenya after a series of local IGFs held in Kenya, Rwanda, Tanzania and Uganda. The proceedings of this meeting reflected issues of prime concern to the region. Currently, eight regional IGFs have been established in various parts of the world.⁵

The fifth Internet Governance Forum, the last in the series of IGFs, stressed the importance of renewing the IGF mandate as a multi-stakeholder platform for dialogue. Discussions focused on a number of topics such as 'the Internet way', a "decentralized open and inclusive multi-stakeholder collaboration that allows for innovation and creativity at the edges". Discussion also refocused on expanding access to the Internet to the next billion users, stressed the importance of migration to Internet protocol version 6 (IPv6), and highlighted the role played by interactive social media in improving access and diversity. Emerging technologies including cloud computing were also examined.

II. SHARED VISION

A. REGIONAL DIMENSION

The Internet holds great potential for nations and people. It has become the backbone of many industries and sectors in this globalized world. If not properly seized, the Internet will continue to evolve out of the reach of developing countries. The Arab countries must make far-reaching commitments and develop policy measures to ensure an appropriate position of the Arab region in the Internet governance arena. Integrating the Arab region into the global Internet governance process and reaping all foreseen benefits must be sustainable and equitable, fulfil recommendations of the WSIS for building the information society and take into consideration regional strategies and plans of action formulated for this purpose.

⁵ IGF, available at: www.intgovforum.org/cms/regional-igfs.

⁶ Draft Chairman's Summary of the Fifth Meeting of the Internet Governance Forum, Vilnius, 2010.

The ability to communicate and access information for citizens and nations must be fundamental to the region's vision, therefore finding ways to ensure that Internet governance directly serves the needs of developing countries is of profound importance.

Such a vision acknowledges the necessity of providing countries with the opportunity to participate in Internet governance and reap its benefits for shaping their future without the risk of losing cultural identity. A shared understanding must help these countries transform the threats and challenges of the Internet into opportunities for development.

B. GUIDING PRINCIPLES

The guiding principles for Internet governance represent a common understanding of characteristics that define what the Internet should be. Though common for the Arab region, a few national differences may apply. The principles, in alphabetical order, are as follows:

- Democratic and collaborative governance should be sought to ensure a transparent and multilateral manner of Internet governance allowing the participation of various segments of society;
- **Functionality, security and stability** of the network must be continuously preserved by adopting technical measures consistent with international standards;
- **Innovation** is to be sought through promoting the continuous development and widespread dissemination of new technologies and models for access and use;
- **Legal and regulatory frameworks** must preserve the dynamics of the Internet as a space for collaboration;
- **Standardization and interoperability** based on open standards will enable all to participate in the development of the Internet;
- Unaccountability of the network implies that all action taken against illicit activity on the
 network must be aimed at those directly responsible for such activities, and not at the means of
 access and transport;
- Universality of Internet access makes the Internet a tool for human and social development, thereby contributing to the formation of an inclusive and non-discriminatory society.

The above guiding principles were inspired by and modelled after the experience of Brazil,⁷ and the Principles for the Governance and use of the Internet formulated by the Brazilian Internet Steering Committee, (more details about this committee are in box 1). Brazil's guiding principles have been acknowledged in many IGF sessions and workshops⁸ and the country itself has been described to be "pioneering a model of Internet governance that encourages the effective participation of society in decisions about implementation, administration and use of the network". ⁹

⁷ In 2007, Brazil hosted the second IGF and is currently participating in regionalizing the Internet governance process in Latin America and the Caribbean. These regional efforts fall within the Regional Plan of Action on the Information Society in Latin America and the Caribbean (eLAC2010) to which the Economic Commission for Latin America and the Caribbean (ECLAC) servers as the technical secretariat. ECLAC, Monitoring of the Plan of Action eLAC2010: Advances and challenges of the information society in Latin America and the Caribbean, 2010.

⁸ IGF-V, 2010. Chairman's Summary (see footnote 6).

⁹ Glaser, H. R., *Internet Governance in Brazil; A multi-stakeholder approach*, International Telecommunication Union (ITU). Available at: www.itu.int/itunews/manager/display.asp?lang=en&year=2009&issue=03&ipage=18&ext=html.

These principles, high-level in nature, will provide strategic guidance for policymakers in the Arab region to derive policies that would help disseminate the benefits of the Internet while maintaining its robust and innovative model in their respective countries.

Box 1. The Brazilian Internet Steering Committee

The Brazilian Internet Steering Committee (CGI.br) was established by an inter-ministerial ordinance in 1995. Its objective is "coordinating and integrating all Internet service initiatives in Brazil, as well as promoting technical quality, innovation and the dissemination of the services available". The CGI.br model is based on multi-stakeholder participation by the Government, the private sector and the academic community. CGI.br involves representatives from civil society in discussions and debates on Internet priorities with the Government. As part of its activities, CGI.br issued a resolution that defines the guiding principles for Internet governance.

Source: Brazilian Internet Steering Committee, available at: www.cgi.br/english/.

(a) National and regional policy formulation

Formulating policies to enhance issues of Internet governance on the national and regional levels is of utmost importance. Arab governments will be able to promote the development of their countries if resulting projects and programmes are integrated into a national development plan of action. All stakeholders should be involved, be it governments as primary actors or the private sector and civil society. Their efforts should be coordinated within an enabling environment conducive to the financing and implementation of planned activities.

The existence of a supportive and predictable legal framework is an important prerequisite for providing this enabling environment. Review of relevant legislation must be carried out, where appropriate, with the aim of enacting modern, open and technologically-aware laws. Governments of the region must be aware of established Internet-related standards and norms set out by international organizations.

(b) Capacity-building

The Internet provides rational, socially and economically-sustainable, as well as culturally-enriching opportunities for improving education and training that must be seriously pursued. Creating and taking advantage of educational processes and providing technical training and guidance at the highest level is of utmost importance and particular attention must be directed to research and development activities for specific areas of technology, including such subjects as IPv6, new Internet technologies, domain names, developing digital content and open-source software. Programmes that develop capabilities for start-up Internet enterprises (such as registries and registrars) to become globally competitive through information and communications technologies (ICTs) should also be initiated.

C. PRIORITIES FOR ACTION

Most of the issues addressed by all five IGFs are of relevance to the Arab region. Issues of higher priority are reflected below.

- **Institutional Empowerment**: participating in global public Internet policymaking in order to shape more balanced, accountable, internationalized and transparent institutional governance schemes;
- Critical Internet Resources: making sure that the following CIR are managed on an equitable basis: (a) root zone files and root server system; (b) domain names; (c) Internet protocol addresses; (d) innovative and convergent technologies; and (e) technical standards;

- Access: enhancing Internet access and reducing the divide between the Arab and developed regions;
- Cultural and Linguistic Diversity: improving Internet diversity by increasing digital Arabic content as well as Arabic domain names;
- **Security**: enhancing the Internet's security and protecting users in the Arab world from cyber threats and risks;
- **Openness**: facilitating the move towards a more open Internet in the region and using this improved openness for development purposes.

It should be noted that the selected priorities above are not an exclusive list of issues covered. For instance, the recently discussed topic of "Internet governance for development" is in fact inherent within other topics. A number of suggested policy guidelines will directly contribute to fostering Internet governance for development.

More attention is awarded to current pressing challenges facing the Arab region. Thus, emerging technologies such as cloud computing discussed in IGF-V are not currently a priority topic. Future updates will allow additional programming on recent technological trends.

D. TOWARDS A REGIONAL ROADMAP

The Internet Governance Forum was the result of global efforts to achieve good Internet governance, responding to the need and demand for a worldwide platform for deliberations by all stakeholders on Internet governance issues. Regional aspirations were also reflected through regional IGFs that unified the views and concerns of a number of regions. The Arab region must follow suit and define and unify priorities and target goals.

The development of a regional roadmap entails understanding what the region's priorities are, where to promote them, and how to formulate policies and later on, develop activities to achieve maximum impact and benefit from the decentralized feature of Internet governance. The regional roadmap should capitalize on existing national, regional and global efforts such as the WSIS, the Arab ICT Strategy (2007-2012) and the Regional Plan of Action for Building the Information Society.

The regional roadmap must promote long-term government spending on Internet governance issues, on specifically-tailored projects, and on research and development activities with the aim of reaching intended goals. It must provide incentives and regulatory schemes that enhance capabilities of all stakeholders in terms of human resource development and institution building.

Arab countries must ensure that all stakeholders' needs, including the specific requirements of the region's varied communities, are taken into consideration in the process of Internet governance. Quantitative as well as qualitative means must be deployed using indicators and other effective measures for monitoring performance.

III. PURPOSE OF THE ROADMAP

Now that the IGF process is concluding, it is time for the Arab region to set up its own agenda of priorities that will tackle Internet governance from national and regional perspectives, with a sharp focus on the main themes of IGF. Accordingly, in 2010, ESCWA paved the way for the "Arab Regional Roadmap for Internet governance: Framework, Principles and Objectives", which was adopted by the League of Arab States during the Expert Group Meeting on Regional Roadmap for Internet Governance (25-26 October 2010) and will thus be implemented by its member countries on a national level.

Internet Governance issues are complicated, intertwined and rapidly evolving as is clearly shown by the change in focus themes of consecutive IGFs. Regional empowerment in the Internet governance arena needs time. Hence, the regional roadmap is needed to streamline efforts, translate discussions into actions, and sustain momentum even if the initial champions (political and technical activists) change.

This roadmap represents a clear strategic framework aimed at tackling Internet governance matters from a regional perspective by:

- Serving as a guideline for decision- and policy-makers in the Arab countries;
- Providing a first stage to launch a future follow-up process;
- Enabling Arab countries to effectively act on their views and needs within the global arena, hence proactively participating in an optimal global policy structure for Internet governance;
- Promoting the role of Arab countries as effective players in the global Internet society.

In the absence of such a solid, strategic document based on shared vision at the regional level, the Arab countries are at risk of the following:

- Dispersed and possibly duplicated efforts in all Internet governance issues;
- Weak representation of the region in international policymaking bodies;
- Minimal or even lack of regional partnerships for Internet governance;
- Absence of a point of reference for formulating national policies, projects and initiatives.

IV. ADOPTED METHODOLOGY

A. ROADMAP STRUCTURE AND POSITIONING

The methodology adopted for designing, managing and implementing this roadmap is inspired by the "result-based" model, employed by the United Nations for planning its programmes which determines objectives and expected accomplishments to be reached by adopting certain strategies. Success is measured using well-defined indicators of achievement. The roadmap is thus more of an articulation of what countries in the region hope to accomplish, rather than just what must be done.

This structure is referred to as the "Logical Framework" known for short as logframe. The logical framework is essentially a written tool for conceptualizing programmes. The programme components, objectives, expected accomplishments, external factors, strategies, activities and indicators of achievement are linked in a hierarchical and logical manner, the first three of which are included in this roadmap. There must be a **linkage** between all of these elements.

- **Objectives:** An objective is an overall desired achievement involving a process of change and aimed at meeting certain needs of identified end-users, within a given period of time. It should answer the question: "What does this subprogramme intend to achieve?"
- **Expected accomplishments:** An expected accomplishment is a succinct statement about the intended result, leading towards the achievement of objectives and answering the question: "What must happen in order to meet the objective of the subprogramme?"
- **External factors:** External factors are the expected and unexpected factors beyond the programme's control that have a plausible influence on the achievement of the expected accomplishment.

Figure I depicts the three main stages agreed on that will facilitate good Internet governance in the region. **Stage 1** comprises the current document: Arab Regional Roadmap for Internet Governance:

Frameworks, Principles and Objectives. It should be noted that this roadmap considers other ongoing regional efforts that also serve the same purpose of good Internet governance. For example, the Arab ICT Strategy for 2007-2012 and the Regional Plan of Action (RPoA) for Building the Information Society both bring up matters of high relevance to the roadmap while ESCWA has a number of additional ongoing programmes and projects that directly contribute to its content.¹⁰

Stage 2 is a complementary document entitled "Guidelines for the Implementation and Progress Monitoring of the Arab Regional Roadmap for Internet Governance" (see box 2).

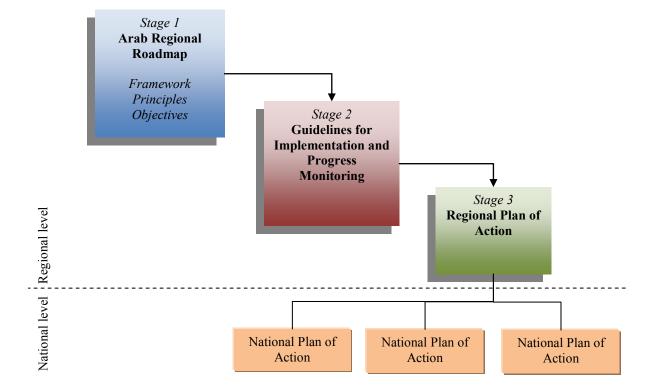


Figure I. Strategic framework and stages of Internet governance

¹⁰ ESCWA has implemented a number of projects that directly contribute to the subprogrammes on institutional empowerment, access and diversity. The following are main activities: (a) contributing to key activities of Internet governance and participating in international meetings of the Internet Corporation for Assigned Names and Numbers (ICANN) and ITU; (b) promoting an Arabic domain name system to allow the use of Arabic in a domain name as well as to acquire and manage a new generic top-level domain "arab" and its equivalent in Arabic script "عربي"; (c) promoting digital Arabic content (DAC) by encouraging the growth of the DAC industry and launching national competitions for selecting DAC initiatives that were deemed likely to succeed through an incubation process.

Box 2. Guidelines for the Implementation and Progress Monitoring of the Arab Regional Roadmap for Internet Governance

The guidelines are a direct extension of the regional roadmap, proposing the means for implementation and progress monitoring. They include the following elements of the logframes: strategy, guidelines for policy and action and indicators of achievement.

- **Strategy:** highlights efforts to be made within a set time period to meet the needs of intended beneficiaries and to achieve the expected results;
- **Policy and action:** are proposals for policies to be formulated and actions to be taken to transform resources into outputs:
- Indicators of achievement: measure to what extent the objectives and expected accomplishments have been achieved.

These guidelines are to be refined, enriched and enhanced as part of planned public follow-up that is transparent and multi-stakeholder in nature. To this end, the Call from Arab Stakeholders has specified that the guidelines be reviewed through public online consultations and be part of the Arab IGF process once it is launched.

Stage 3 builds on the previous two stages in the form an Internet governance plan of action that will define specific activities, projects, programmes, and initiatives on national and regional levels based on financial and human resources available to each country. This plan of action will be a collective effort and will be in line with the Arab ICT Strategy and the RPoA, avoiding duplication by integrating aspects of these documents that serve Internet governance issues. Figure II details the components of each stage.

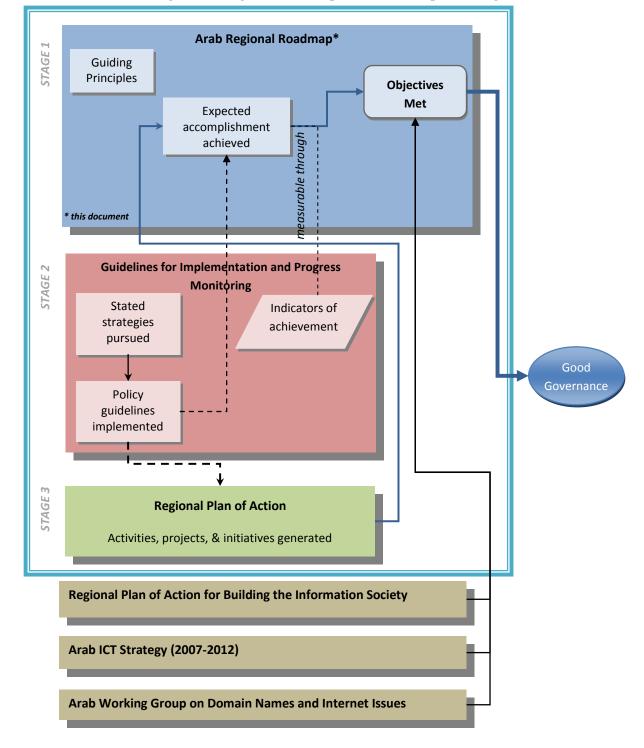


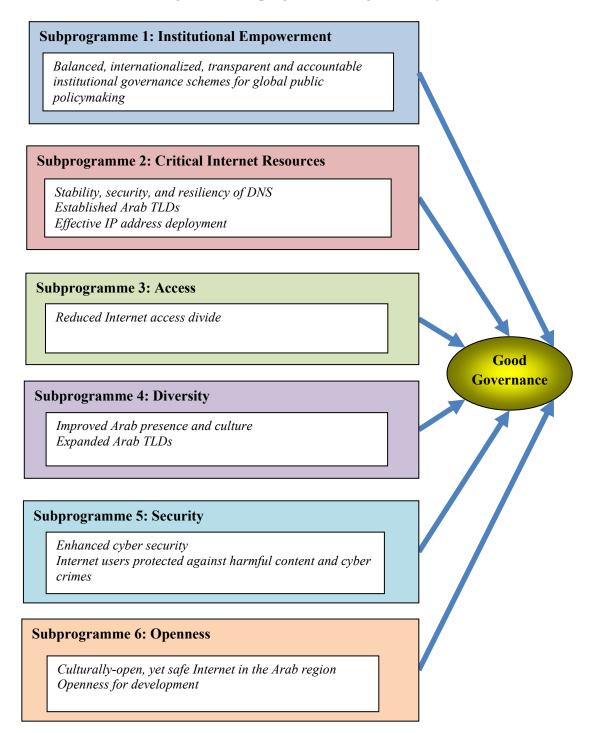
Figure II. Regional roadmap structure and positioning

Subprogrammes of the roadmap are based on themes identified during the IGF process. Issues and problems for subprogrammes have been researched and discussed in ESCWA's study "Internet Governance: Challenges and Opportunities for the ESCWA Member Countries". 11 Accordingly, a logical framework is

¹¹ Internet Governance: Challenges and Opportunities for the ESCWA Member Countries (see footnote 3).

developed for each subprogramme to articulate clear objectives and expected accomplishments. Figure III depicts the targets and objectives as formulated in the detailed logical frameworks in the following section.

Figure III. Subprogrammes, targets and objectives



Note: DNS: domain name system, TLDs: top-level domains, IP: Internet protocol.

B. IMPLEMENTATION MODALITY AND PARTNERSHIPS

This roadmap consists of setting clear logical frameworks in the form of objectives and expected accomplishments for enhancing Internet governance and the role of the Arab region in a good governance scheme. The Arab region in general and/or Arab countries in specific can translate this roadmap into initiatives, projects and activities in line with one or more subprogramme of this roadmap. Thus, logframes suggested in this document can be adopted and implemented at the national level by Arab countries and at the regional level, either by the League of Arab States or other regional organizations. Proper resources must be allocated to activities on the national and/or regional level and then aggregated into a plan of action as previously explained. The formulation of the plan of action from the national to the regional level will thus be based on a bottom-up approach.

In such a case, member countries can adopt the roadmap on a national level and generate their own national plans of action in line with their resources and capacities. Setting the timeline for actions of the subprogrammes will be the responsibility of the adopting countries, but should be consistent with other member countries when possible.

On the regional level, the League of Arab States may ratify objectives and expected accomplishments suggested in this roadmap in an effort to harmonize implementation of activities among member countries. Partnership on the regional level is also key to developing, implementing and monitoring progress of this roadmap.

The above features characterize the roadmap while others are described in box 3.

Box 3. Main roadmap features

Partnerships between relevant stakeholders, public, private and civil societies, form a basis for transforming this roadmap into tangible projects and initiatives at the local, national or regional levels;

Decentralization will allow governments and involved stakeholders to monitor progress of their own work without the need for a central regional management authority. The collective efforts of various parties will then contribute to realizing the objectives of this roadmap;

Modularity is a basic structural component of the roadmap. Each subprogramme is an independent and self-contained module, yet allows for flexibility of structural changes. For example, new modules may be added as priority issues emerge and separate modules may be combined as necessary;

Open-ended timeframe will allow the extension of allocated periods of time for implementing the roadmap and reaching objectives. To start with, a period of five years will be allocated, to be extended in line with achieved results and follow-up. This feature of the roadmap will also allow adding, modifying, or deleting a subprogramme at any point in time as needed. It is recommended, however, to avoid major changes for at least the first two years;

Leadership is needed as a result of the modularity features. Countries or other stakeholders will be able to take leadership of one or more subprogrammes as "champions" to ensure proper implementation, monitor progress and coordinate activities among involved parties;

Monitoring progress is integral to the structure of each subprogramme, particularly through defined "indicators of achievement". Stocktaking is another method of choice for measuring progress towards planned objectives.

C. PROGRESS MONITORING

The outputs of implemented activities have to be evaluated in order to classify them either as successful or failed actions. The outputs of some activities are quantifiable, such as the percentage increase of top-level domain names in Arabic, while others are qualitatively assessed, such as the level of maturity of a law for e-commerce.

While this monitoring process has to be on both national and regional levels, it may be done in two different ways: (a) by stocktaking and (b) by measuring indicators of achievement.

Stocktaking involves a separate entity that gathers reports and summaries of activities that were implemented in member countries. These reports would be analysed and progress in each subprogramme highlighted. This methodology requires a minimum level of structured follow-up, is more ad-hoc in nature and thus seen as quite feasible from the beginning.

A more methodical approach for monitoring the implementation of Internet governance goals is by means of indicators of achievement which measure the extent to which expected accomplishments have been achieved as a result of a subprogramme's intervention. Measurements can be either quantitative or qualitative.

As previously explained, indicators of achievements that can be used as a basis to measure the impact of activities on Internet governance in a given Arab country are included in the document entitled "Guidelines for the Implementation and Progress Monitoring of the Arab Regional Roadmap for Internet Governance".

Implementation modality and progress monitoring can be a collective task whereby each country is allocated one subprogramme and the regional aggregation allocated to the League of Arab States.

V. SUBPROGRAMME 1: INSTITUTIONAL EMPOWERMENT

Internet governance has evolved during the past few years into a structure that combines two main approaches: (a) a multi-stakeholder governance model based on bottom-up policymaking such as the model adopted by the Internet Corporation for Assigned Names and Numbers (ICANN); and (b) an intergovernmental model such as the model adopted by the International Telecommunication Union (ITU). The representation and contribution of Arab stakeholders concerned with Internet governance issues in both models, including governments, the business sector, civil society and academia, remains limited.

With the onset of the IGF, the Arab Internet community started to become aware of the importance of Internet governance. Arab countries have gradually improved the level of participation and representation of ICT policymaking bodies involved in Internet governance at the annual IGF meetings as well as periodic ICANN and ITU meetings. The Internet Governance Forum has been a useful platform for voicing the concerns and needs of developing countries. Though initially weak, Arab official and expert representation at IGFs has improved over the years.

As an indicator of the region's concern with Internet governance issues, the League of Arab States, through the Arab Telecommunications and Information Council of Ministers (ATICM), formed a working group named the Arab Working Group on Domain Names and Internet Issues (AWGDNII) in order to deal with matters related to the Internet and Arabic Domain Names. AWGDNII has been meeting on a regular basis to address issues including views of Internet governance at the policymaking level concerning ICANN and such other international bodies as ITU and the Internet Engineering Task Force (IETF).

TABLE 2. LOGFRAME FOR INSTITUTIONAL EMPOWERMENT

Objective	Expected accomplishments
To play a substantial role in shaping a more	EA1.1 Improved level of active participation of Arab stakeholders in
balanced, internationalized, transparent and accountable institutional governance scheme	the Internet global public policymaking process
for global public policymaking.	EA1.2 Improved representation of all Arab stakeholders at the leadership and decision-making level in Internet public policymaking bodies and constituencies
	EA1.3 A robust regional mechanism for advocating Internet governance issues launched
	EA1.4 Enhanced cooperation on the subregional level
External factors	
Internet governance bodies are receptive to the Arab region's efforts to take part in policymaking activities.	

VI. SUBPROGRAMME 2: CRITICAL INTERNET RESOURCES

Critical Internet Resources refer to resources without which the Internet cannot function. Overseeing these resources on an equitable basis is important for Internet governance functions. Issues relating to their management include:

- Administration of the root zone files and root server system;
- Administration and allocation of domain names:
- Internet Protocol (IP) addresses:
- Innovative and convergent technologies;
- Technical standards.

Currently, administration of the master root zone file lies within the jurisdiction of a single government authority – a possible vulnerability of the system and a challenge to the Arab region. The basic stability of the Internet is maintained by means of mirror root servers around the world, including in three Arab countries. Yet, stability is diminished through increased Internet access, Web devices, and innovative Web applications and services which have the potential to destabilize the Internet.

Ensuring the stability, security and resiliency of the Internet thus becomes of paramount importance particularly through formulating policies that reflect global interoperability and cooperation. The security of the domain name system (DNS) falls within the framework of such policies, particularly since the DNS has become the target of malicious activities and attacks.

Then again, the DNS has been the subject of effort for expansion into new top level domains (TLDs) as well as the introduction of Internationalized Domain Names (IDNs), leading to the reinvigoration of the domain name industry including its registrar constituents. The expected surge in new domain name registrations will soon face the depletion of available numbers within version 4 of the IP (IPv4). That is why organizations and companies worldwide have moved towards adopting and implementing IPv6.

TABLE 3. LOGFRAME FOR CRITICAL INTERNET RESOURCES

Objective	Expected accomplishments	
1. To ensure the stability, security, and	EA1.1 Improved implementation of security measures for DNS in	
resiliency of DNS	the Arab region	
2. To expand TLDs pertaining to the Arab region in DNS	EA2.1 Enhanced role of the Arab region in the decision making process for developing DNS	
	EA2.2 Improved Arab presence in TLD space	
3. To effectively deploy IP addresses	EA3.1 Increased number of IPs in the Arab region	
	EA3.2 Increased regional capacity for implementing IPv6	
External factors		

- International Internet governance institutions show a willingness to cooperate;
- Regional Internet Registries will be supportive of the Arab region's efforts to improve the status of relevant resources.

VII. SUBPROGRAMME 3: ACCESS

Access to the Internet involves a number of issues including communications, resources, services and the ability to reach online information. Although access is not a problem per se for developed countries, it holds high priority for developing countries. To achieve an appropriate level of access there is a need to have suitable digital content, reliable and reasonably-priced connectivity, as well as upgraded and improved infrastructure. On the one hand, the presence of these conditions encourages non-Internet users to access and utilize the Internet while, on the other hand, improves online experience and added value for current and regular Internet users.

However, many communities in the Arab world are still short of the basic requirement to access the Internet: access devices. High prices of these devices and in some cases their increased complexity constitutes a deterrent to their acquisition, particularly by disadvantaged populations. Even though there are ambitious national and local initiatives to facilitate access to Internet devices through community centres, they are still insufficient to achieve a notable effect. Attention to persons with special needs is still lacking in terms of determining their requirements and supplying them with technologically suitable devices.

Language is another deterrent to increased access to online content. Suitable and useful content, particularly in the Arabic language, is still limited to about 0.3 per cent of all online content, an extremely small proportion considering that Arabic speakers account for 5 per cent of the population worldwide. Most people in the Arab region prefer to obtain online information and access services using their native Arabic language. Even when accessing websites, there is an obvious preference to use the Arabic language for defining and accessing domain names, which were till recently limited to the use of the American Standard Code for Information Interchange (ASCII) characters. The introduction of IDNs and the registration of Arabic domain names at the beginning of 2010 are milestones in a forthcoming resolution of the language issue.

Needless to say, fast and inexpensive connectivity is necessary to ensure improved user experience. There is a need to upgrade the currently available regional infrastructure and at the same time ensure the acquisition of international bandwidth at lower prices.

The number of Internet users is nearing two billion, which is still less than 30 per cent of world population. By improving access, the Arab region can contribute to the growth of these numbers.

Objectives and expected accomplishments

TABLE 4. LOGFRAME FOR ACCESS

Objective	Expected accomplishments
To narrow the Internet access divide	EA1.1 Increased usage of Internet access devices and access points
between the Arab region and developed	
regions	EA1.2 Enhanced presence of Arabic digital content and user-friendly Internet applications including Arabic addressing schemes
	EA1.3 Enhanced network infrastructure allowing access to the Internet
	EA1.4 Decreased cost of Internet access
External factors	'
- Global cooperation in enforcing policies for reducing connectivity costs;	

- Availability of low-cost access devices with new technologies.

VIII. SUBPROGRAMME 4: CULTURAL AND LINGUISTIC DIVERSITY

Diversity in cyber space is an issue that cuts across the Internet governance debate. It is at the core of a more inclusive information society and was strongly supported in both the WSIS Geneva Declaration of Principles and the Tunis Commitment. The outcomes from both phases stressed the fact that maintaining cultural and linguistic diversity constitutes a prerequisite for the flexible integration of users from different backgrounds in the information age.

To satisfy a variety of users, the issue of Internet cultural and linguistic diversity is thus addressed on three levels: online content diversity, internationalization of domain names and user diversity. Enhancing user diversity overlaps the issue of Internet "access". Thus improving access will lead to increased numbers of Arab users which in turn will lead to enhanced user diversity.

Multilingualism is a key concept for ensuring true diversity. Till now, English is the most dominant language online and Arabic ranks seventh in terms of Internet users by language. 12 However, promoting digital content is not only confined to content written in the Arabic language, but also extends to material developed about the region in other languages, such as cultural heritage content.

The current status of the content industry within the region and the lack of national strategies for its further development are the main obstacles to flourishing Internet diversity. Investment in research and development is also quite weak, the pursuit of which would greatly enhance the presence of Arabic language processing tools and applications. This is mainly due to a lack of funding, incentives and awareness.

¹² Internet World users by Language; Top 10 Languages, 2010. Internet World Stats; Usage and Population Statistics. Available at: www.internetworldstats.com/stats7.htm.

TABLE 5. LOGFRAME FOR DIVERSITY

Objective	Expected accomplishments	
To improve the presence of the Arabic language and culture on the Internet	EA1.1 Improved availability of digital Arabic content and services online	
	EA1.2 Enhanced number of Arab Internet users	
2. To expand TLDs pertaining to the Arab region in DNS	EA2.1 Enhanced role of the Arab region in the decision-making process for developing DNS	
	EA2.2 Improved Arab presence in TLD space	
External factors		
Availability of funding to invest in a digital content industry and finance research and development activities.		

IX. SUBPROGRAMME 5: SECURITY AND PRIVACY

Since the initial IGF meeting, security has been considered a cornerstone theme and topics addressed include DNS, Public Key Infrastructure (PKI), Internet attacks, security awareness and policies and legal measures to ensure a safe and secure Internet experience worldwide. Security is a very broad area where multiple topics must be tackled, since ignoring one or more while securing other areas would still jeopardize the safety of Internet users.

The number of Internet users is increasing at a very rapid rate and coming quite close to 2 billion. The increase in online content and e-services results in an increase in the number of users and vice-versa. However, this puts thousands and millions of new and novice Internet users at risk. Accordingly, Internet security has two focus areas: network assets and personal assets; where the former include hardware, software and connectivity and the latter include user devices and data.

Most common types of attacks are driven by viruses, Trojan horses, worms, and spyware which on many occasions are collectively named malware. The lack of user awareness concerning security risk and vulnerabilities of operating systems and applications allows such malicious software to sabotage and damage network assets or harm personal user assets through stealing, modifying or deleting user data. Attacks that affect the infrastructure backbone such as submarine cable damage may jeopardize the entire regional connectivity.

It has also been voiced, through discussions on Internet openness that the Internet should provide a safe haven where individuals can express their own ideas and safely use its services without the fear of harmful impact. In a paradigm for privacy/safety in the Internet environment, users should be able to post ideas anonymously and have their privacy preserved.

TABLE 6. LOGFRAME FOR SECURITY

Objective	Expected accomplishments	
To enhance cyber security in the Arab region	EA1.1 Reduced number of reported incidents that negatively impact the Internet service in the Arab region	
	EA1.2 Decreased incident response time	
	EA1.3 Increased Internet security measures	
	EA1.4 Enhanced user awareness on security matters	
	EA1.5 Established policy and legal frameworks for cyber security	
To protect Arab Internet users against harmful content and cyber crimes	EA2.1 Established policy and legal framework for content filtering and censorship	
External factors		
- International, regional and national cooperation on cyber laws.		

X. SUBPROGRAMME 6: OPENNESS

Internet openness and its constituent topics are seen as closely connected to legislation currently in place within the Arab countries that defines the principle of privacy and/or freedom. This legislation has resulted in measures implemented by governments in the region that defines a framework for access to information and knowledge; privacy and data protection, filtering and censorship and intellectual property. Local and regional cultures within the Arab world strongly affect the manner in which governments and even individuals address the issue of openness. A vast gap separates the views of the Arab region from other regions, particularly those of developed countries.

While ESCWA countries have not regulated free speech and censorship on the Internet, they have addressed these issues in national laws, including those relating to media and information which regulate the press, television and radio broadcasting, as well as those relating to penal and criminal laws. Internet openness is thus considered a grey area that requires clear laws to regulate online speech and expression.

Closely connected to openness is the issue of privacy, since ensuring user privacy would facilitate expression of Internet users' views and opinions without fear of repercussions. This is an area of overlap with the security subprogramme.

Intellectual property is also the subject of substantial debate in the Arab region and interregionally, generating different views and levels of interest. It has been noted that copyright and licensing laws place Arab countries, and developing countries in general, at a disadvantage when attempting to access scientific research and knowledge.

TABLE 7. LOGFRAME FOR OPENNESS

Objective	Expected accomplishments	
To enhance the status of a culturally- open, yet safe Internet in the Arab region	EA1.1 Improved online expression and access to services	
To improve Internet openness for development purposes	EA2.1 Increased access, use and development of open-source technologies and software	
	EA2.2 Decreased restriction on access to knowledge	
External factors		
- International cooperation on conventions and cyber laws;		
- Understanding of cultural discrepancies and specificities on the subject of openness.		

XI. FINAL NOTES

The current document, the regional roadmap, is stage 1 of a three-stage process to achieve good Internet governance in the Arab region within ongoing global efforts for this issue. The basic framework for stage 2 has already been developed in the form of an ESCWA document entitled "Guidelines for the Implementation and Progress Monitoring of the Arab Regional Roadmap for Internet Governance". The guidelines are also divided into six subprogrammes that match the subprogrammes within this regional roadmap. They are, thus, a direct extension of the roadmap.

The Call of Arab Stakeholders - Towards Promoting Arab Cooperation for Internet Governance Regionally and Internationally¹³ has clearly indicated the need to refine, enrich and enhance these guidelines within the future regional Internet governance mechanism to be implemented in the form of an Arab IGF.

¹³ The Call of Arab Stakeholders is available in Arabic at: http://css.escwa.org.lb/ictd/1301/16.pdf.