JAMHUURIYADDA FEDERAALKA SOOMAALIYA

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هورية الصّومال الفيدر اليـــــة

وزارةالإتصالات والتكنولوجيا

FEDERAL REPUBLIC OF SOMALIA The Ministry of Communications & Technology

# Somalia Digital Development Review 2022

August 2022

## **Somalia Digital Development Review 2022**

<b>Cluster 1</b> <b>Strategic frameworks</b> WSIS and the SDGs							
Cluster 2 The State Infrastructure, governance, legislative environment	Cluster 3 The economy Production, ICT sector competitiveness, economic growth	<b>Cluster 4</b> <b>Society</b> Public administration and social inclusion					
Cluster 5 Culture and the media							
Cultural ide	Cultural identity, linguistic diversity, the media						

# Cluster 1: National, regional and international strategic frameworks

(1) National digital strategies: role of government and stakeholders in promoting ICT for development (C1)<sup>1</sup>

National level A comprehensive national digital strategy exists (like Digital Nation, Smart Nation, Digital Economy, e-commerce, etc.)	Νο
Name of the strategy	
Year of adoption and latest update	
Government agency in charge	
Pace of implementation	
Description of progress made (maximum 150 words)	
Sectoral level	
ICT sector strategy/plan exists	Yes
Name of the strategy/plan	ICT Policy and Strategy

Government agency in charge

Year of adoption and latest update

**Ministry of Communication and Technology** 

<sup>&</sup>lt;sup>1</sup> C1 refers to one of the 11 WSIS action lines.

P.O. Box: 66, BN03010, Mogadishu - Somalia Via Republic, Mogadishu, Somalia. E-mail: <u>info@moct.gov.so</u>

Pace of implementation	Average
Description of progress made (maximum 150 words)	Somalia's Ministry of Communication and Technology (MoCT) announced that the National ICT Policy and Strategy has been approved by the Cabinet. The five-year policy provides the framework needed to leverage the benefits of ICT to support the social and economic development of the country. It outlines the development and enhancement of ICT across Somalia over the period 2019-2024 and aims to promote transformation, growth, inclusiveness, sustainability, innovation and partnerships in the mainstream economy, while recommending institutional and regulatory frameworks in order to achieve its intended goals.
Other sectors Digital transformation strategies/plans exist (digital learning, digital health, etc.) (Repeat the five rows below for each strategy/plan as required)	There are no digital transformation strategies focused on digital learning or digital health. All digital transformation strategies are launched by MoCT for developing the ICT sector>
Name of the strategy/plan	Development of Cybercrime legislation, Cybersecurity policy and strategy, and e-government policy and strategy are planned, including projects such as building a national data center and development of data protection legislation.
Year of adoption and latest update	2022-2023
Government agency in charge	МоСТ
Pace of implementation	N/A
Description of progress made (maximum 150 words)	N/A

(2) National engagement in regional and international cooperation initiatives (C11)

Follow-up to the World Summit on the Information Society

Somalia did not participate in this initiative.

**Global Roadmap on Digital Cooperation** 

Somalia did not participate in this initiative.

#### **Other related frameworks**

To our knowledge there is no other related framework in which Somalia is involved. fors

# Cluster 2: Infrastructure, governance and legal environment policy areas

Infrastructure is central to achieving digital inclusion and enabling universal, sustainable, ubiquitous and affordable access to ICTs by all. This cluster considers relevant services already in place in developing countries and in countries with economies in transition, to provide sustainable connectivity and access to remote and marginalized areas at the national and regional levels.

#### Market structure and regulatory landscape

The Telecom Market structure in Somalia is privatized where the service of mobile and internet are provided by
private companies whereas the role of the Federal government is regulatory and monitoring.

	Status of regulatory landscape	Main awarded telecom licenses		
Telecom service				
Mobile services	competitive	Hormuud, Somtel, Telesom, Amtel, Golis, Somnet, Somlink, Somafone, Naitonlink		
Internet services	competitive	Dalcom, Somaliwireless, Hormuud, Somtel, Telesom, Amtel, Golis, Somnet, Somlink, SON, Sahal Telecom.		

#### ICT infrastructure by service type

Service	<u>Availability</u>
mobile phone services	Yes
Internet services	Yes
Fixed line	Yes
mobile broadband	Yes
fiber-to-the-home (FTTH)	YES
Next-Gen Wireless	No

Internet service providers (ISPs):

Hormuud, Somtel, Telesom, Amtel, Golis, Somnet, Somlink.

Service mobile phone networks and penetration:

Dalcom, Somaliwireless, Hormuud, Somtel, Telesom, Amtel, Golis, Somnet, Somlink, SON, Sahal Telecom.

Indicator	Value	Latest year
Mobile phone penetration (subscriptions)	7.55 million mobile connections in Somalia	January 2021
Percentage of households with Internet access	10.6 %	2021
International Internet bandwidth (bit/s) per Internet user	11.39 mbps	2021
<ul><li>Percentage of the population covered by mobile networks:</li><li>At least 3G</li><li>At least LTE/WiMAX</li></ul>	Internet penetration in S in January 2021. Most of access 4G.	omalia stood at 10% the population now
<ul> <li>Fixed-broadband subscriptions by speed tiers as a percentage of total fixed-broadband subscriptions:</li> <li>256 Kbit/s to 2 Mbit/s</li> <li>2 to 10 Mbit/s</li> <li>10 Mbit/s or more</li> <li>Ref: <u>https://datareportal.com/reports/digital-2021-somalia</u></li> </ul>		

#### **ICT connectivity**

The Ministry is now developing National ICT inclusion policy focusing on the marginalized groups such as Women/Youth and people with disability.

#### **Internet architecture**

There are around 4 submarine cables in the country, brought by private companies.

• Availability of Wi-Fi hotspots, WiMAX services and 3G/4G mobile networks.

Most of the people are using Wi-Fi hotspots in the crowded areas; they pay a user to connect to the hotspots. Telecom operators are providing 3G access in their networks. Most of the Wi-Max connections are used in home based networks.

o Fiber optics networks and Internet submarine cables:

The fiber optics cables and the submarine cables are available in Somalia, including EASY cable, and DARE1 cable inland in Mogadishu. Bosaso city has G2A submarine cable. Three fiber optics Internet cables are functioning and by the end of this year there will be two more cables inland in Mogadishu. • National and regional Internet exchange centers, and regional root servers:

Five networks are expected to be connected directly to SOIXP.so with a combined capacity of 10 Gbps, and expected to increase.

 Adoption of the Internet Protocol version 6 (IPv6): SomaliREN.SO is the only network implementing IPv6 so far Others have not yet planned to migrate from IPv4 to IPv6.

Name of country code top-level domain (ccTLD) registrar	Name in English: SONIC Name in Arabic:				
URL of registrar	https://sonic.so/				
		2019	2020	2021	
country (English) for the years 2019, 2020	Arabic	N/A	N/a	N/a	
and 2021	English	Available	Available	Available	

#### Domain name management and adoption

(2) Governance (C1 and C11)

## Public/private partnership, multisector partnership and role of nongovernmental organizations

There is no structural dialogue involving all relevant stakeholders to take part in the digital strategies for information society. Also, there is no national level mechanism for promoting partnerships among stakeholders. The Ministry of Commerce is the only entity which has PPP when it comes to the trade facilitation, in the sector of technology we are behind doing the strategies, and we only use for validation workshops for policies and strategies. **Participation in Internet governance activities** 

- There is no structural dialogue. But the government do PPP through validation workshops and conferences.
- In August 2021, Somalia Internet Governance Forum (SIGF.SO) was established and the Somali Government has the main role to bring all the stakeholders together.
- Somalia has not yet established relationships with Arab Internet Governance Forum (AIGF) but will follow-up on the issue to continue.

- Somalia has been recently involved in the Global Internet Governance Forum process, and the Minister of Communication and Technology, with an official delegation participated in the IGF2021 in Katowice, Poland.
- the Internet Corporation for Somalia has a role in ICANN's consultations through the Internet , But is more connected to AFRINIC, the responsible entity for Africa's assigned Internet protocols.

#### (3) Legal environment, ethics and trust (C2, C5, C6 and C10)

#### Legal and regulatory environment

- In Somalia the existing legal framework is embedded in our Telecommunication law, which paved the way to establish the National Communications Authority.
- •
- Intellectual property rights are not yet drafted A Telecommunication law was passed in 2017, paving the way for the establishment of National Telecommunications Authority (Refer to <a href="https://nca.gov.so">https://nca.gov.so</a>)
- Cyber legislations, such as e-signature, e-transactions, e-commerce and e-payment are not yet available.

International treaties and conventions on intellectual property	Adopted	Observer status	Year of adoption
World Trade Organization	No		
Paris Convention on the Protection of Industrial Property	Νο		
Patent Cooperation Treaty	Νο		
World Intellectual Property Organization Copyright Treaty	No		
Madrid Agreement Concerning the International Registration of Marks	No		
Hague Agreement Concerning the International Registration of Industrial Designs	No		
International treaties and conventions on intellectual property	Adopted	Observer status	Year of adoption

Patent Law Treaty	No	
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)	Νο	
Other related treaties/conventions (specify):	(yes/no)	

Cyberlaws	Available?	Law number	Year passed
E-transactions law	Νο		
E-signature law	Νο		
E-payment law	Νο		
E-commerce law	Νο		
Law for the management of public key infrastructure	No		

#### Open data and open access to information

In this regard, you are required to:

- The Ministry of Communications and Technology is working for the first time on a data protection law that has not yet been finalized.
- There is an awareness campaign being carried out by the National Communications Authority focusing on how to prevent online harassments and user theft (see Somcert.gov.so).

#### Data privacy and data protection

• The Ministry of Communications and Technology is working for the first time on a data protection law, which has not yet finalized.

#### **Countering ICT misuse and preventing ICT abuse**

• For the time being there is no Cyber security law in place, but a data Protection law and a cybersecurity law are the two laws that the Ministry of Communications and Technology is working on. So preventing ICT misuse will come when these two laws andrelated policies are in place.

#### Use of electronic transactions and documents

• E-signature is not currently available.

#### **Online and network security**

- As mentioned above the Ministry is planning to put in place the National Cyber security act and National Data protection law, which will be mandated to protect any threat in and out to the Government resources and to ensure citizens data are protected.
- Somalia Computer Emergency Response Team/Coordination Center (SomCERT/CC) is the first
  national/governmental CERT in Somalia. In May 2019, SomCERT/CC was formed as a section/unit of the Cyber
  Security Department by the National Communications Authority (NCA) with the objective of securing Somalia's
  cyberspace and providing an official point of contact to handle cybersecurity incidents in the Somali Internet
  community. for more information, please visit somcert.gov.so,

# Cluster 3: Digital economy, employment and trade policy areas<sup>2</sup>

(1) Digital economy and the ICT sector (C12)

#### Government institutions shaping the ICT sector

- Provide a list of ICT regulators (authorities or commissions) in your country and their respective mandates, highlighting achievements/successes and challenges.
- 1- Ministry of Communication and Technology: The Ministry of Communications and Technology (MoCT) is the lead Federal Government body mandated to formulate national policies related to post, telecommunications, and information and communications technologies (ICT). Its mandate also includes:
- Overseeing ICT sector standards
- Promoting the development and growth of telecommunication infrastructure and ICT
- Lead Digital Development
- Protecting the interests of consumers
- 2- Fostering a knowledge-based economy and information society in Somalia.National Communications Authority: The National Communications Authority (NCA) is the regulatory body for the communications sector in Somalia.

<sup>&</sup>lt;sup>2</sup> Some sections in the present chapter (including related tables in the annex) may require coordination with the Ministry of Economy and/or economic development agencies.

The NCA is responsible for facilitating the development of the ICT sector, enabling and ensuring fair and sustainable competition, carrier interconnection, transparency in the implementation of the Communication Law, protecting consumer interest and rights, and maintaining its role as an independent regulator

Provide the name(s) of the ministry (ies) involved in governing the digital economy and their respective mandates.

- Ministry of Communication and Technology
- National Communication Authority
- Office of the Prime Minister
- Office of the Presidency
- Ministry of Finance
- Ministry of Commerce

#### Actors in the ICT sector

• Indicate how the above sets of businesses are classified in your country, from the point of view of statistical offices, and from the point of view of the Ministry of Economy.

Private Companies don't provide such information as it's confidential and the ministries do not have complete information of this kind

No	Company	Employment	Business	Classification	Nature of the	Ownership
	name	Category	Volume		company	
1	Hormuud	Large	Large	Using ICT in	Telecom/networks	Private
	Telecom			its business.		
				Selling		
				internet		
				equipment		
2	Somtel	Large	Large	Using ICT in	Telecom/networks	Private
				its business.		
				Selling		
				internet		
				equipment		
3	Telsom	Large	Large	Using ICT in	Telecom/networks	Private
				its business.		
				Selling		
				internet		
				equipment		
4	Amtel	Medium	Medium	Using ICT in	Telecom/networks	Private
				its business.		
				Selling		
				internet		
				equipment		

5	Golis	Large	Large	Using ICT in	Telecom/networks	Private	]
				its business.			
				Selling			
				internet			
				equipment			
6	Somnet	Medium	Large	Using ICT in	Telecom/networks	Private	
				its business.			
				Selling			
				internet			
				equipment			
7	Somlink	Medium	medium	Using ICT in	Network	Private	
				its business.			
				Selling			
				internet			
				equipment			
8	SON	Low	Small	Using ICT in	Network	Private	
				its business.			
				Selling			
				internet			
				equipment			
9	Sahal	Low		Using ICT in	Telecom/networks	Private	Private
	Telecom			its business.			
				Selling			
				internet			
				equipment			

• Provide, if possible, statistical data or information on the following: There is no statistical data available right now.

Research, development, innovation and standardization to promote the ICT industry

There are no standards in place currently in ICT Industry

#### Government facilitation for entrepreneurship and investment in the ICT sector

ICT sector in Somalia is on its initial stages so most of the services are not provided, and the government do not have capacity to support this sector

#### (2) Economic impact of the ICT sector (C12++)<sup>3</sup>

#### Contribution of the ICT sector to the national economy

In this regard, you are required to:

- Fill table 1 (core indicators on the ICT producing sector) and table 2 (core indicators on international trade in ICT goods and services) set out in the annex to the present document.
- Indicate the added value of the ICT sector to GDP in your county.
- Provide illustrations on selected determinants of ICT contribution to growth in your country, such as education, manufacturing, automation, cost of ICT, investments institutional quality, and income levels, if possible.

#### Trade in ICT goods and services<sup>4</sup>

This information cannot be obtained since the government provided these services.

#### **Digital trade**

There are few privately operated E-business, but we don't have concrete data or information of this topic. The government recently stated online business registration to boost the number of E-businesses in the country.

Law/service	Available	Law number	Year passed
E-banking law	(No)		
E-commerce law	(No)		
E-payment law	(No)		
Other e-services laws	(No)		

• Fill in the following table:

#### **Employment in the ICT sector**

Many organizations s have been supporting to boost employment in ICT sector such as EU, UNDP and others. But now we do not have reliable information about the level and number of employment whether low, moderate or high in ICT Sector in Somalia.

<sup>&</sup>lt;sup>3</sup> Organisation for Economic Co-operation and Development, World Trade Organization and International Monetary Fund, Handbook on Measuring Digital Trade, Version 1, 2020.

<sup>&</sup>lt;sup>4</sup> UNCTAD presents data and figures on trade in ICT goods and services at the national, regional and international levels, available at https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=15850.

#### **Employment through the Internet**

There is no available information.-----

# Cluster 4: Digital transformation and social inclusion policy areas<sup>5</sup>

#### (1)

Inclusiveness (access): availability, development, affordability and adaptability

There is no available information.

Empowerment (use): education, entertainment, political engagement and economic returns

#### **Targeted training programs**

• There is no training programs for ICT in any level.

#### E-government (C7)<sup>6</sup>

The Ministry of Communication and Technology will establish a National e-Government Central Portal that will be the main residents, business, and visitors' gateway and portal for government services. Some priority services have been identified based on the services that every citizen have a right to get and popular citizen centric services.

• Indicate the use and adoption of ICT in public administration in terms of:

We have these services in some Institutions

- Computerizing public administration.
- Computerizing customs processing.
- Computerizing taxation and revenues management systems.
- Digitizing information.

But we don't have ICT in these sectors

- Environmental sector.
- Transport sector.
- Engaging with all citizens.
- Provide information on the availability of e-government services including:

government project and with the Presidency of the Council of Ministers.

<sup>&</sup>lt;sup>5</sup> Some sections in the present chapter may require coordination with the Ministry of Social Affairs and/or social development agencies.

<sup>&</sup>lt;sup>6</sup> The present section (including related tables in the annex) requires coordination with the authority in charge of the e-

There are some E-Government services in Somalia like following two points

- $\circ$   $\$  G2G (government-to-government) interaction between local and central governments.
- G2B (government-to-business) interaction between local and central government and the commercial business sector.

But we don't have G2C (government-to-citizen) service

• Fill in the following table:

Authority in charge of ICT in public administrations	Ministry of Communications and Technology وزارة الإتصالات والتكنولوجيا WWW.moct.gov.so
E-government authority	Not yet established
Number of implemented e-government services	6
Number of planned government eservices	

• Indicate availability, adoption and use of e-procurement applications.

• Fill in the following table by indicating available services on the e-government portal:

URL of e-government portal: (http://	NOT AVAILABLE		
	General		
Information	Laws	NO	
	Directories		
	Static information	YES	
Services	Downloadable forms		
	Interactive		
E-payment		NO	
Online account		YES	
Multilingual			

<b></b>	Blogs	YES
Citizen participation	Polls	YES
	Facebook	YES
	Twitter	YES
Social media	LinkedIn	YES
	YouTube	YES
	WhatsApp	YES
	Really simple syndication (RSS)	NO
Additional services	Web statistics	
	Search	
	Support for smartphone/tablet	YES
Mobile version	Dedicated app (iOS or Android based)	YES
Other features	(indicate)	

• Also fill in table 4 (core indicators on ICT in government) set out in the annex to the present document.

#### E-learning/e-education (C4/C7)

The Ministry of Education has added ICT courses to the curriculum in primary schools

And also, during the Covid-19 pandemic the ministry attain E-learning Portal which the students in primary and secondary schools get their courses through online

In Higher Education all institutions owned by private sector and most universities and colleges have online platforms in their own

#### E-health (C7)<sup>7</sup>

Ministry of Health accomplish an online platform that has been used to store the data of Covid-19 and it was created during the initial period of covid-19 until now it is working and it is used in the most of the south and central Somalia.

<sup>&</sup>lt;sup>7</sup> The present section requires coordination with the Ministry of Health.

#### Covid-19 dashboard: https://labimso.com/covid19/

The Ministry also recently attain a platform that has been used to store health information in the country, this program supported by UNICEF and the Norwegian government. Although it has not yet been fully implemented, it is a program that wishes to combine all health data in our country, this is an international level program that is used by most developing countries.

District Health Information System 2 (DHIS2): https://dhis2.org/

### Cluster 5: Culture and media policy areas

#### (1) Cultural identity and linguistic diversity (C8)<sup>8</sup>

Majority of Somali people use same language although there some minor groups use different accent but in social media and all media platforms, we use common Somalia language

#### Use of ICT in support of cultural and linguistic diversity

Most of Somali people use Somali language in media in all but there is some minor groups use other accent like Maymay in some area in the country

#### (2) Media (C9)9

Mass media in Somalia includes various radio, television, print and internet outlets. The federal government operates two official radio and TV networks, which exist alongside a number of private and foreign stations. Print media in the country is progressively giving way to news radio stations and online portals, as internet connectivity and access increases. The Somali parliament has passed an amend of Somalia's Media Law

#### Media diversity, independence and pluralism

In this regard, you are required to:

• Indicate if there is diversity of media and media ownership in your country.

The media has brought together different sections of society such as youth, women and scholars

• Fill in the table below, indicating the number of media outlets in each category.

<sup>&</sup>lt;sup>8</sup> The present section may require coordination with the Ministry of Culture.

<sup>&</sup>lt;sup>9</sup> The present section may require coordination with the Ministry of Information.

		Ownership			
Media outlets	Language(s)	Private	Mixed	Government	Foreign
Newspapers	Somali and English	12	0	1	0
Electronic newspapers	English and Somali	3	0	1	0
Magazines	English	1	0	2	0
News agencies	English and Somali	0	0	1	0
Radio stations	Somali, Arabic and English	19	0	2	0
Television stations	Somali, Arabic and English	10	0	2 TV Station	0

• Indicate if there is government support for media institutions and reporters.

The government does not have financial capability to support Media Institutions

- Indicate the existence of legislation governing the media sector, such as that dealing with freedom and plurality of information. We have Somali Media Law drafted by the ministry if information and approved by the parliament
- Describe the media sector contribution to the freedom and plurality of information. Media is the main source of information provider for Somali people.
- Describe the portrayal of women in the media. Not only in the media but generally women in Somalia play Somali women play Significant Role in the society in every sector such as education and media
- Indicate the percentage of female media journalists/editors. Most of the media institutions is owned by private sector so we cannot get secure information about females in media

#### Role of the media in the information society

In this regard, you are required to:

- Provide an assessment of the role of the media: print, broadcast and new media in the information society.
   Mass media in Somalia includes various radio, television, print and internet outlets have significant role on information society and most of the people rely on media for getting information
- Highlight the use of traditional media in bridging the knowledge divide and facilitating the flow of knowledge, particularly in rural areas. Traditional media in Somalia has recently declined significantly and its use only dependent on the elderly, but the middle age and young people have moved to the new media

Indicate the extent to which social media is used in preserving the cultural identity of peoples and enhancing countries' linguistic diversity. The effects resulting from social media have been exposed in all countries. However, Somalia is still adapting to a new reality characterized with the rapid development of the means of communication and the content they carry, in which there are many differences specifically of the local cultural identity. Our mother tongues are still dominant in our conversations on social media

#### Convergence of ICT and the media

In this regard, you are required to:

- Describe the national preparedness for convergence of television, Internet and telephony (triple play). The telecom operators now providing triple play services and Fiber to the |Home. The country has already adopted on the technology.
- Provide statistics for double and triple packages.

#### We don't have the statistics, because the owned refuse to give us. Social media

In this regard, you are required to:

• Highlight the role of social media in raising awareness and building the information society.

### A social media platform is very crucial role in the awareness campaign, specially the cyber-crimes that always happen through internet.

 Indicate the extent to which social media is used to preserve the cultural identity of individuals and ethnic and cultural groups, and to enhance the country's linguistic diversity. In the last decade or so with the rise of social media usage Somalia has benefited .....

### **Useful initiatives**

(1) Other initiatives and success stories

- There are digital initiatives in place now, such as developing the National DATA CENTER, National data protection office establishments and National cyber security law but not yet approve by the parliament

(2) Handling emerging events and crises

## The National Communications authority is establishing office of Telecommunications emergency, which is mainly focus on Telecomm and technology emergencies.

• Indicate how your country has dealt with such events and crises through ICT means, and whether positive results have been achieved.

The best example is the way the country has handled the Covid-19 crisis, we have used systems that provided daily information to the citizens, and declaring that those who are effected. Vaccinations status can be online, and see it.

## 2. Organizational guidelines

#### A. Review process

#### 1. Background

ESCWA organised a series of research meetings (September–October 2020) with the 10 Arab countries that participated in the first round of the national digital development reviews (NDDRs) for 2019, namely Iraq, Jordan, Kuwait, Mauritania, Oman, the State of Palestine, the Sudan and the Syrian Arab Republic, Tunisia and the United Arab Emirates. The work within the framework of these interviews focused on discussing the opinions of the members of the national task forces, taking into account their suggestions, directions and observations, and benefiting from their experience in the process of updating and improving work methodology, preparing reports, and proposing new paths, procedures and tools for the next round. This work aimed to improve the content of the reports, enhance their impact, and invest in stimulating digital transformation in support of sustainable and comprehensive economic and social development at the national and regional levels.

The outcomes of these interviews and the discussions that took place between the ESCWA team concerned with the regional digital development report and these countries, and then at the meeting of experts in November 2020, emphasized the need to reconsider the process of preparing NDDRs and the regional Arab Digital Development Report (ADDR). The roles of ESCWA and of countries participating in the process of updating the work have been defined, as follows.

#### 2. ESCWA role

ESCWA plays a leading, directive and coordinating role in preparing NDDRs and ADDR through the following tasks:

#### In the process of preparing national reviews • Announcing and launching the preparatory

work for NDDRs, with a specific timetable.

- Identifying the concerned authorities in participating countries and formally writing to them, inviting them to participate in preparing a national review, and motivating them to monitor the necessary human resources and sensitizing decision makers about the importance of this work.
- Providing further guidance on the national coordination mechanism, communication links and data flows at the national level.
- Preparing/updating indicative models on the nature and form of information required in the preparation of national reviews, and adding a section dealing with emerging events and crises such as COVID-19.
- Defining/updating the responsibilities of national focal points in line with the proposed amendments.
- Including a component on capacity-building for experts who participate in the work in a clear and explicit way, given their need to understand the relationship of ICTs with sustainable development.
- Coordinating with and providing support to national teams to organize a workshop for the five clusters included in the pilot model, so as to progress in parallel in the reports and standardize concepts between participating countries.
- Moving towards the gradual use of more quantitative indicators to compare between countries regarding digital development, and adding indicators in new areas such as electronic participation, open data, women and persons with disabilities.
- Using the indicators in the ICT Development Index to measure digital development, and add indicators related to quality of life, a country's economy and the size of the labour market in the field of information technology.
- Using other global indicators to cover various aspects of digital development and, if necessary, creating maturity index for digital development in the Arab region and using it to measure progress in countries and encourage competition between them;
- Increasing the time for gathering information and drafting NDDRs to between six to nine months, so that the resulting reports are of high quality and publishable.

#### In preparing the regional report

 Preparing the regional ADDR based on the reviews of participating countries; and adopting a frequency of no less than two years and no more than four years for issuing ADDR, as this pace appears to be the most appropriate given the size of the report, the time it requires, and the specificity of the ICT sector, which is developing rapidly.

- Launching officially the regional digital development report by ESCWA and disseminating it widely to generalize the benefit, and sending it to the relevant authority in each of the participating countries, while highlighting the importance of this report and taking its recommendations into consideration.
- Presenting the regional report to the Council of Arab Communications Ministers in its periodic meetings to show what has been achieved and to obtain support from the League of Arab States, and increase the interest of non-participating countries to participate in the future.
- Studying the importance and possibility of developing a smart observatory for Arab digital development by
  creating an online platform for data with the participation of countries wishing to feed and update it in real
  time. However, before that, it is imperative to establish a clear and unified methodology for obtaining data and
  specifying the responsibilities and necessary resources from the authorities concerned with collecting and
  updating data in participating countries.

#### 3. Role of participating countries

Participating countries play, directly and through focal points, an essential role in preparing NDDRs, particularly in providing data and information required for correct analysis, through the following:

- Appointing focal points and activating their role and responsibilities through the tasks contained in the terms of reference defined by ESCWA.
- Activating and expanding national coordination between public authorities concerned with sustainable development and ICT institutions.
- Forming a central national committee to oversee the preparation of NDDR, and organizing workshops to coordinate and review work.
- Making greater efforts to understand and measure economic indicators, as they are the most difficult for ICT experts.
- Committing to deadlines for collecting information and formulating the national review, within a period of no less than six months and up to nine months, according to the plan agreed by ESCWA and the national focal points.
- Organizing several national working sessions during the preparation of reviews to collaborate among all experts in overcoming difficulties and clarifying concepts, if necessary.
- Organizing a workshop, in collaboration with ESCWA, to present NDDR and inform decision makers in each country and development policymakers about the importance of the report and involve them in future preparation processes.
- Formally launching NDDRs at the national level and widely disseminating them through official websites, noting that this requires high quality in drafting reports.
- Possibly applying for technical cooperation from ESCWA to develop a national digital agenda based on NDDR, if there is a need.
- Encouraging the participation of countries wishing to feed the digital development observatory, and updating related data and information in real time, after establishing a clear and unified methodology for obtaining these

data and specifying the responsibilities and necessary resources from the authorities concerned with collecting and updating data in participating countries.

#### B. Terms of reference for national focal points

#### 1. Tasks

The main/alternate national focal points for the assignment, subject of these terms of reference, will be entrusted with the following tasks, among others that could be identified during the

implementation of this assignment through collaborative work with the coordinator(s) assigned by ESCWA for the 2021 national digital development reviews (NDDRs) and the 2021 Arab Digital Development Report (2021 ADDR):

- (a) Undertake initial desk-research work and prepare the literature review for NDDR, covering various areas to be tackled in the 2021 NDDR;
- (b) Based on the ESCWA standard template for the 2021 NDDR, identify the national partners/institutions/experts who could contribute to the preparation and production of NDDR;
- (c) Strive (with support from ESCWA, if necessary) towards forming a national supervising committee (NSC) comprising key experts from various sectors/institutions to manage the NDDR process and produce a quality NDDR;
- (d) Coordinate and contribute to the convening (with NSC, if established) of a national workshop/expert group meeting for engaging national partners/stakeholders in the preparation and submission of NDDR;
- (e) Produce (in collaboration with NSC if established) the requested NDDR, including a collection of national case studies, experiences and best practices, while providing a situational analysis identifying information gaps, opportunities and challenges;
- (f) Set out a set of policy recommendations in NDDR, based on analysis of the national status, and aimed at enhancing the utilization of appropriate digital technologies for sustainable development;
- (g) The main/alternate national focal points must integrate the youth dimension and ensure that gender considerations are taken into account throughout the research, including gender analysis and collection and analysis of available sex-disaggregated data. Gender mainstreaming should be considered throughout the preparations, and NDDR should contain gender-sensitive language;<sup>10</sup>
- (h) The main/alternate national focal points should follow the ESCWA Disability Language Guidelines.<sup>11</sup>

#### 2. Outputs

The main/alternate national focal points will produce the following deliverables:

<sup>&</sup>lt;sup>10</sup> www.unescwa.org/sites/default/files/services/doc/guidelines\_gender-sensitive\_language\_e-a.pdf.

www.unescwa.org/sites/www.unescwa.org/files/page\_attachments/guidelines<u>https://www.unescwa.org/sites/www.www.unescwa.org/sites/www.unescwa.org/sites/www.unescwa.org/sites/www.</u>

disability language english version 0.pdf\_disability\_language\_english\_version\_0.pdf.

- (a) An inception document, including a literature review, potential national partners/institutions/experts, the constitution of the national supervising committee (if needed), and a proposed methodology to prepare NDDR, with an envisaged timeline and due date for submission of outputs;
- (b) First draft of NDDR, based on the desk research and data gathered from national sources, including a situation analysis with identified national information gaps, opportunities and challenges;
- (c) A second semi-final draft of NDDR based on the outcome of a national workshop/expert group meeting;
- (d) Compiled comments and feedback from the ESCWA team;
  - (e) Final version of NDDR, after responding to the comments/feedback provided by the ESCWA team;
  - (f) A NDDR dissemination plan.

#### 3. Follow-up and responsibilities

ESCWA will assign a coordinator for this assignment, subject of these terms of reference, and will follow-up with the main/alternate national focal points on progress towards the successful completion of the assignment. The main/alternate national focal points shall abide by the terms set and fulfil the responsibilities and tasks that are detailed in these terms of reference.

ESCWA commits to providing the main/alternate national focal points with the information needed for this assignment in a timely and transparent manner.

#### 4. Duration and timing

The total duration required for the preparation of NDDR should preferably be within a six-month period but should not exceed nine months. A specific plan should be set with the ESCWA team for the full implementation of these activities.

### Annex. ICT core indicators

#### Table 1. Core indicators on the ICT producing sector<sup>a</sup>

Core indicator	Definitions and notes	201	201	202
		8	9	0

ICT 1	Proportion of total business sector workforce involved in the ICT sector (expressed as a percentage)	<ul> <li><i>ICT workforce</i> (or ICT employment) consists of those persons employed in businesses that are classified as belonging to the ICT sector.</li> <li><i>Total business workforce</i> represents all persons engaged in domestic production in the business sector. In a national accounts' framework, employment can be measured in terms of headcounts, jobs, full-time equivalents or hours worked.</li> <li>The industry-based definition of the ICT sector was based on Revision 3 of the International Standard Industrial Classification (ISIC Rev. 3).<sup>b</sup> This definition was slightly revised in 2002 according to ISIC Rev. 3.1.</li> <li>In 2007, the principles underlying this definition were reviewed leading to a narrower definition. The revised definition is now based on ISIC Rev. 4.</li> <li>The total business sector is defined on an activity (industry) basis per ISIC Rev. 3.1 as divisions 10-67 and 71-74. It therefore excludes: agriculture, hunting, forestry and fishing; real estate activities (because a significant proportion of the value added of the latter consists of imputed rent of owner-occupied dwellings); and community, social and personal services (which consist mainly of nonmarket activities such as public administration, education and health services).</li> <li>For countries using ISIC Rev. 4, the total business sector is not so easily defined. It will most likely</li> </ul>			
Core i	ndicator	Definitions and notes	201 8	201 9	202 0
		include the equivalent divisions 05-36, 41-66, 69-82 and 95 (ISIC Rev. 4, Part II, chap II, pp. 45-61). Discussions are ongoing on whether the total business sector should include some industries that were not included in the ISIC Rev. 3.1 definition of the total business sector (divisions 37-39, 90-93 and 96).			

ICT 2	ICT sector share		
	of gross value	Gross value added for an industry represents its	
	added	contribution to national GDP. It is sometimes referred to as	
	(expressed as	GDP by industry and is not directly measured (but is	
	a percentage of	estimated in a national accounts' framework). In general, it	
	total business	is calculated as the difference between production (gross	
	sector gross	output) and intermediate inputs (the energy, materials and	
	value added)	services required to produce final output).	
		Definitions of the ICT sector and the total business sector	
		are those mentioned in ICT1.	

<sup>a</sup> The core indicators on the ICT producing sector (ICT 1 and ICT 2) presented in table 1 are based on the UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, table 7.

<sup>b</sup> ISIC: International Standard Industrial Classification of All Economic Activities was developed by the United Nations Department of Economic and Social Affairs/Statistics Division to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities. It was first published in 1948, then reissued in several consecutive revisions, the latest of which was ISIC Revision 4 in 2009. Previous versions include: ISIC Revision 2 (1968); ISIC Revision 3 (1990); and ISIC Revision 3.1 (2002).

Core i	ndicator	Definitions and notes	201 8	201 9	202 0
ICT 3	ICT goods imports as a percentage of total imports	ICT3 is calculated as the quotient of the value of imports of ICT goods divided by the total value of all imports (expressed as a percentage). <i>ICT goods</i> are defined per the OECD's 2003 "A <b>Proposed Classification of ICT Goods</b> ", based on the 1996 and 2002 Harmonized System classification (more information can be found on the UNCTAD <b>Classifications</b> ).			
		Other concepts are per the UN Comtrade Database, e.g. re-exports and re-imports are not netted out, and data are presented in United States dollars (US\$) (converted from country currencies).			

#### Table 2. Core indicators on international trade in ICT goods and services<sup>a</sup>

ICT 4	ICT goods exports as a percentage of total exports	<ul> <li>ICT4 is calculated as the quotient of the value of exports of ICT goods divided by the total value of all exports (expressed as a percentage).</li> <li><i>ICT goods</i> are defined per the OECD's 2003 "A</li> <li>Proposed Classification of ICT Goods", based on the 1996 and 2002 Harmonized System classification (more information can be found on the UNCTAD Classifications).</li> <li>Other concepts are per the UN Comtrade Database, e.g. re-exports and re-imports are not netted out, and data are presented in US\$ (converted from country currencies).</li> </ul>		
ICT 5	ICT services imports as a percentage of total imports of services	ICT5 is calculated as the quotient of the value of imports of ICT services divided by the total value of imports of all services (expressed as a percentage). <i>ICT services</i> are defined by UNCTAD <sup>b</sup> and include telecommunications services, computer services/computer software, computer services/other computer services, licenses to reproduce and/or distribute computer software.		
ICT 6	ICT services exports as a percentage of total exports of services	ICT6 is calculated as the quotient of the value of exports of all ICT services divided by the total value of exports of all services (expressed as a percentage).		

<sup>a</sup> The core indicators on international trade in ICT goods and services (ICT 3, ICT 4, ICT 5 and ICT 6) presented are based on the UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, tables 9 and 11. <sup>b</sup> UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition, p. 62.

#### Table 3. Core indicators on ICT in education

Core indicator	Definitions and notes	201	201	202
		8	9	0

ED1	Proportion of schools with a radio used for educational purposes (by ISCED levels 1 to 3)	Schools offering radio-based education as a percentage of the total number of schools in the country for each ISCED level (1-3).	N/A	N/A	N/A
ED2	Proportion of schools with a television used for educational purposes (by ISCED levels 1 to 3)	Schools offering television-based education as a percentage of the total number of schools in the country for each ISCED level (1-3).	N/A	N/A	N/A
ED3	Proportion of schools with a telephone communicati on facility (by ISCED levels 1 to 3)	Schools with telephone communication facilities as a percentage of the total number of schools in the country for each ISCED level (1-3). Note that the facility should be directly associated with the school. For instance, a mobile phone which is owned by an individual working at the school would not constitute a school telephone communication facility.	N/A	N/A	N/A
ED4	Student- tocomputer ratio (by ISCED levels 1 to 3)	Average number of students per computer in schools that offer computer-assisted instruction by each ISCED level (1- 3).	N/A	N/A	N/A
ED5	Proportion of schools with Internet access, by type (by ISCED levels 1 to 3)	Schools with access to the Internet as a percentage of the total number of schools in the country for each ISCED level (1-3).	N/A	N/A	N/A
Core in	dicator	Definitions and notes	201 8	201 9	202 0

ED6	Proportion of students who have access to the Internet in school (by ISCED levels 1 to 3)	Total number of students with access to the Internet in schools as a percentage of the total number of students in schools offering Internetassisted instruction in the country by each ISCED level (1-3).	N/A	N/A	N/A
ED7	Proportion of students enrolled by gender at the tertiary level in ICTrelated fields <sup>b</sup> (for ISCED levels 5 and 6)	Number of students currently admitted at the tertiary level in ICT-related fields by gender as a percentage of all students enrolled in educational institutions in the country for ISCED levels 5 and 6 (combined).	N/A	N/A	N/A
ED8	Proportion of ICTqualified teachers in primary and secondary schools	Number of primary and secondary teachers who have received ICT training, expressed as a percentage of the total number of teachers at those levels of education.	N/A	N/A	N/A
Reference indicator					
EDR 1	Proportion of schools with electricity (by ISCED levels 1 to 3) <sup>c</sup>	Schools with electricity as a percentage of the total number of schools in the country for each ISCED level (1-3).	N/A	N/A	N/A

<sup>a</sup> The main classificatory variables used for the core indicators on ICT in education are those set up by the UNESCO Institute for Statistics, in "International Standard Classification of Education, ISCED 1997" (pp. 22-39), which recognizes the following levels of education:

- ISCED 1 Primary education or first stage of basic education.
- ISCED 2 Lower secondary or second stage of basic education.
- ISCED 3 Upper secondary education.
- ISCED 4 Post-secondary non tertiary education (programmes that lie between the upper-secondary and tertiary levels of education).

ISCED 5 – First stage of tertiary education (not leading directly to an advanced research qualification).
 ISCED 6 – Second stage of tertiary education (leading to an advanced research qualification).

<sup>b</sup> ICT-related fields include computer science, computer engineering, information and communication technology, information systems, multimedia systems, ICT management, system support and software development, informatics, etc. Those are represented in the UNESCO

International Standard Classification of Education-ISCED 1997 (ISCED was revised and published in 2011: http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-

2011<u>http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-</u> 2011-en.pdfen.pdf). According to the ISCED fields of education code list, the ICT-related fields come under code 48-Computing, code 21Arts (audio-visual, media production and design) and code 52-Engineering and engineering trades (electronics and automation). Those fields involve substantial work in understanding the technical aspects of ICT rather than a more generic or basic use of ICT.

<sup>c</sup> Since electricity is not specifically an ICT commodity, but an important prerequisite for using many ICTs, it is not included in the core list, but added as a reference indicator. International studies reviewed by the UNESCO Institute for Statistics (UIS) revealed that the lack of electricity is such a significant barrier in many developing economies that monitoring trends of its provision is as relevant as monitoring ICT supply and use.

Core indicator		Definitions and notes	201 8	201 9	202 0
EG1	Proportion of persons employed in central government organizations routinely using computers	The proportion of persons employed in central government organizations routinely using computers is calculated by dividing the number of persons employed in central government organizations, who routinely use computers, by the total number of persons employed in central government organizations. The result is then multiplied by 100 to be expressed as a percentage. An optional indicator may be calculated separately for males and females (or other individual characteristics).			
EG2	Proportion of persons employed in central government organizations routinely using the Internet	The proportion of persons employed in central government organizations routinely using the Internet is calculated by dividing the number of persons employed by central government organizations, who routinely use the Internet, by the number of persons employed by central government organizations. The result is then multiplied by 100 to be expressed as a percentage. An optional indicator may be calculated separately for males and females (or other individual characteristics).			
Core indicator		Definitions and notes	201 8	201 9	202 0

#### Table 4. Core indicators on ICT in government

EG3	Proportion of central government organizations with a local area network (LAN)	The proportion of central government organizations with a LAN is calculated by dividing the number of central government organizations with a LAN by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.			
EG4	Proportion of central government organizations with an intranet	The proportion of central government organizations with an intranet is calculated by dividing the number of central government organizations with an intranet by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.			
EG5	Proportion of central government organizations with Internet access, by type of access	The proportion of government organizations with Internet access, by type of access, is calculated by dividing the total number of central government organizations with Internet access (by each type of access and 'any' access) by the total number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage. Note that the sum of percentages of all types of access is likely to exceed 100, as many central government organizations will have more than one type of access service.			
EG6	Proportion of central government organizations with a web presence	The proportion of central government organizations with a web presence is calculated by dividing the number of central government organizations with a web presence by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.			
EG7	Selected Internetbased services available to	Unlike indicators EG1 to EG6, this indicator refers to both central and state/provincial levels of government. This is necessary to ensure international comparability as the services selected may be offered by different levels of government			
Core indicator		Definitions and notes	201 8	201 9	202 0

citizens, by level of sophisticatio n of service	across countries. Because the approach taken to measuring Internet-based services is relatively untested and because responses may be somewhat subjective, the indicator is initially considered to be 'experimental'.	
	The indicator is weighted by population in order to show the significance of government Internet-based services at the national level.	
	The indicator is expressed in terms of the percentage of a country's population that is theoretically able to access each Internet-based service. Note that this does not refer to whether a citizen has the equipment or knowledge necessary to access those services, whether s/he needs to access those services or whether s/he directly benefits from them (for example, most of the services are not relevant to children). The ability to access each service will usually be linked to the relevant jurisdiction, for example, a citizen residing in a particular state will theoretically be able to access Internet-based services offered by that state government, though may not need to, wish to, or be technically capable of doing so.	

Source: United Nations Department of Economic and Social Affairs, United Nations e-Government Survey, 2018.