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|  | **2021** |
|  | Economic Cooperation Organization  ECO Secretariat  *Transport & Communications* |

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“**Ways and means to establish and develop ECO regional fiber optic network**”

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**Glossary**

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| --- | --- |
| ECO – Economic Cooperation Organization  RPC – Regional Planning Council  CPR – Council of Permanent Representatives  ITU – International Telecommunications Union  PoA – Plan of Action  TRIPS – The Agreement on Trade-Related Aspects of Intellectual Property Rights  EU – European Union  FTF – free to facility  SEP –standard essentials patent  QR–quick response  R&D – Research and Development | OFT – Optical Fiber Telecommunications  ICT – Information and Communications Technology  BRI– Belt and Road Initiative  ZTE – Zhong Xing Telecommunication Equipment  and acquired immune deficiency syndrome  CSS ̶ Cascading Style Sheets  CV-19 – coronavirus disease  SDGs – Sustainable Development Goals  ATM – Asynchronous Transfer Mode  SDH – Synchronous Digital Hierarchy  DWDM – Dense Wavelength Division Multiplexing  CMS – Content Management System |

# Executive summary

Following sub-item (a) of clause (19) of “*Functional Methodology of ECO*” (1998) which prescribes that ECO Secretariat prepares the Terms of reference (ToR) for a study project, the present document has been prepared by Directorate of Transport & Communications so that the processing of study project commence.

The present Terms of Reference (ToR) are for hiring a Specialist to prepare a study titled: “**Ways and means to establish and develop ECO regional fiber optic network**”.

The ToR have been aligned with ECO’s requirements that have been set for small sized projects via: “*Practical Steps for ECO Small Sized Projects” as* adopted at the 5th Webynar Meeting of Management (May 5th, 2020).

By procedure, the ToR follow the rules prescribed in the “*Guidelines for ECO Projects*” as endorsed by the 28th Regional Planning Council (RPC). Those are available at: www.local.int.eco.

By format, the present document has so been designed to conform to ECO’s typical framework of a small-sized project (SSP). Therefore, it is harmonious with ECO’s policy, guidelines and approaches prescribed for projects. As such, the present document will guide a Specialist in his/her preparing the subject study. The ToR also specifies workloads to be fulfilled by the Specialist.

# Background

A number of concrete decisions have initiated the start of the subject project. In specific terms, ECO’s high level decision making bodies have decided, in regard of this project, as follows:

The ECO **Regional Planning Council (RPC)**, at its 31st Meeting on 12-21 January 2021 held at ECO Secretariat in virtual mode has endorsed the following: “… to implement, in consultation with ITU, a small sized study project on “Ways and means to establish and develop ECO regional fiber optic network” and to recruit a specialist for implementation of the Study Project in 2021” (paragraph-69, “B” Sector: Transport and Communications, ECO Work Programme 2021).

Further, the RPC (Council), at its **Midterm Review Meeting** on 28th July 2021 held at ECO Secretariat in hybrid mode reconfirmed its previous decision and “… requested the Secretariat to implement, in consultation with ITU, a small sized study project on “Ways and means to establish and develop ECO regional fiber optic network” and to recruit a specialist for implementation of the Study Project in 2021”.

Based on such endorsements, the present document details the set of specifications, which a Specialist to be hired under these ToR, will have to fulfill in the framework of the study project.

# Aims and objectives

The specific aim of the project is to explore and analyze prerequisite arrangements for developing the ECO regional fiber optic network.

To attain the afore-stated aim, the project will focus on ECO region-specific objectives by targeting the following objectives:

1. Development of solid regulatory base by designing ECO norms/provisions (incl. harmonization of radio spectrum use and others) governing the development of the ECO regional fiber optic network.
2. Providing access to the affordable broadband via: i) high-capacity regional, subregional fiber optic networks and inter-counters cross border fiber optic links ii) development of  
   modern internal infrastructure projects to improve fixed and mobile broadband and, iii) creation of the conditions to reduce costs of regional infrastructure rollout.
3. Promotion of access to smart phones/other mobile devices/applications, development of local content, building human capital and increasing adult ICT literacy.

## History in ECO

The history of deployment of Optical Fiber Telecommunications (OFT) in the ECO region has been short. Previous developments have rather been about broadband access and competing- for- access technologies in the rest of the world. The decisions and recommendations adopted in this area mainly focused on the fiber-based approaches to broadband access. Thus, following the decisions of the ECO stakeholders, the region has been able to fulfill activity No. 4 listed under ‘Expected Outcome’ (viii, p.28) of ECO’s strategic document ̶ **ECO Vision 2025**, which tasked that “the two strategic documents will be developed in partnership with ITU, notably, the “*ECO Regional Strategy for Broadband Development*” and “*ECO Regional Strategy for Information Society Development*” (B-Sector of the Implementation Framework of ECO Vision 2025). The latter strategy has actually been developed.

Else, various architectural options, the capital and operational costs, the technological advances have been less in attention of the ECO region as those largely attributed to owners of fiber optic cable installations. Overall, infrastructures that were required for global networks consumed global scale investments.

While individual countries of the region were mainly concerned about cost sharing requirements relating to fiber optic networks, such concerns continually challenged the entire telecommunications sector. Today, technological leaps in terms of scales of manufacture lead to the reduction of cost per user. As a result, broadband applications are expanding in use by subscribers. On the part of national governments, the regulatory frameworks through subsidies do support further deployment of broadband applications.

The discussions at ECO’s expert level meetings and higher decision making levels centered around a plethora of topics including: historical highlights, demographics, costs and revenues, local fiber installations, services scenarios, regulatory policies, applications, bandwidth requirements, network architecture choices and market scenarios. Thus, over the past period (2009-2017), incremental growth in the share of users of Internet in ECO countries registered 12 percent, on average. The highest increase in the share of individual users of Internet of total population was observed in 2010 (23.6%). At global level, such share indicated at 28.7% for the same period (Table 1).

Table : Individuals using the Internet (% of population)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ECO Country | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **Afghanistan** | 3.6 | 4.0 | 5.0 | 5.5 | 5.9 | 7.0 | 8.3 | 8.0 | 11.4 |
| **Azerbaijan** | 27.4 | 46.0 | 50.0 | 54.2 | 73.0 | 75.0 | 77.0 | 78.2 | 79.0 |
| **Iran** | 13.8 | 15.9 | 19.0 | 22.7 | 30.0 | 39.4 | 45.3 | 53.2 | 64.0 |
| **Kazakhstan** | 18.2 | 31.6 | 50.6 | 61.9 | 63.3 | 66.0 | 70.8 | 74.6 | 76.4 |
| **Kyrgyzstan** | 16.0 | 16.3 | 17.5 | 19.8 | 23.0 | 28.3 | 30.2 | 37.0 | 38.2 |
| **Pakistan** | 7.5 | 8.0 | 9.0 | 10.0 | 10.9 | 12.0 | 14.0 | 12.4 | 17.1 |
| **Tajikistan** | 10.1 | 11.6 | 13.0 | 14.5 | 16.0 | 17.5 | 19.0 | 20.5 | 22.0 |
| **Turkmenistan** | 2.0 | 3.0 | 5.0 | 7.2 | 9.6 | 12.2 | 15.0 | 18.0 | 21.3 |
| **Turkey** | 36.4 | 39.8 | 43.1 | 45.1 | 46.3 | 51.0 | 53.7 | 58.3 | 64.7 |
| **Uzbekistan** | 11.9 | 15.9 | 18.6 | 23.6 | 26.8 | 35.5 | 42.8 | 46.8 | 48.7 |
| **ECO** | 14.7 | 19.2 | 23.1 | 26.4 | 30.5 | 34.4 | 37.6 | 40.7 | 44.3 |
| **% change** | 11.3 | 23.6 | 16.8 | 12.7 | 13.2 | 11.4 | 8.6 | 7.6 | 8.1 |
| **World** | 25.37 | 28.71 | 31.15 | 34.23 | 36.64 | 39.86 | 41.69 | 44.84 | 49.00 |
| *Source: WTO* |  |  |  |  |  |  |  |  |  |

Commercial fiber optics technology has evolved in the world over the past 30 year period. However, in ECO, commercial issues have not been in prime focus. In the meantime, the fiber optics cost efficiency has been deployed in the region for increasingly shorter distances in the frameworks of telecommunications networks and, for use of applications with smaller bandwidth-times-distance product.

In view of the above, the multitude of issues that have been in near sight of the world and of the region throughout the historical development, have necessitated a clear focus for the development of the ECO regional fiber optic network.

## Concept

Given the rapidly unraveling pace of the digitalization, the project will conceptually try to strike a fine balance between the excessive optimism for expanding fiber-optic networks across the entire region and far beyond it, and the impact of the new but unregulated business models like ones supporting the “shared economy”.

Helping a region-wide fiber-optic network roll out rather than simply servicing the in-country local residents who most need such networks, promises to be costly. From such considerations, the ECO policy makers have recently focused mainly on regulatory efforts to ensure that sensible **digital business models and private investments** be included in the immediate agenda.

On the other side of the spectrum, the ECO region faces a daunting task to navigate the economic recovery from coronavirus pandemic. One of ways to bring economic normalcy back to countries of the region is trough nurturing inclusive broad-based economic growth.

Added to the above, a variety of economic sectors and sub-sectors, including software, entertainment, security, medical, education, transport, trade and consumer electronics need more of network bandwidth.

In terms of practically implementing the project, those are viewed as the ECO Vision-inspired building blocks of the subject project:

1. Harmonization of regulatory framework for the ECO regional fiber optic network to be established in the region.
2. Ensuring access to ECO regional broadband via affordable means and tools.
3. Promotion of access to smart applications/devices, development of local content, building human capital, increase adult ICT literacy.

## Informative report

This section captures most recent updates in Member States in regard of the developments that occurred since the ECO Council of Ministers Meeting (COM) (8-9 November 2019, Ankara). Thus, there have been a series of virtual meetings organized by ECO Secretariat with the main theme focusing on the impact of COVID-19 in transport sector among others. Views/recommendations of ECO Member States for that matter have been analyzed and a report on the economic impact from pandemic on transport, among others, has been made known to Member States.

The First Meeting of ECO Working Group on Information and Communications Technology (ICT) discussed the agenda which included the establishment of effective regional regulatory framework, cooperation on cyber security and combating cyber-crime and ECO’s role in global digital cooperation towards realization of Sustainable Development Goals (SDGs). It also deliberated on ways to implement the "*2025 ECO Regional Strategy for Information Society Development and Action Plan*".

## Project Rationale and Motivation

### General observation

The laying of fibre-optic cable started twenty years ago at global level. Establishing a region-wide fibre optic network is a challenging task. The main challenge is determining how to ensure ultrafast broadband Internet access to the ECO regional community of nearly 480 million people.

Avoiding tax increments and non-disturbance of national networks led to the situation that many countries now demand larger contributions from global Internet giants like Google, Netflix and others operating world’s various regions. The latters are often seen as “free-riders” in their intent to profiteer on assets and markets of countries that are given access to fibre optic cable. Thus, major global Internet companies have at times massively invested to set up and maintain their networks and data centers essential to Internet’s functioning.

According to global statistics, global Internet companies invested over €75 billion (US$100 billion) in Internet infrastructure over the period of 2017-2020. In addition, investments in establishing consortia to lay fiber optic cables to connect to businesses and government agencies in Asia, of which ECO region is part, has reached over €500 million.

In the context of the present project, the latter may concentrate on developing a harmonized regulatory framework with a view of integrating the fiber optic network at the ECO regional level.

**Economic justification**

There exist a variety of ways to establish the fibre optic network at the ECO regional level.

* One of such ways is through the use of functions of the existing fibre optic cable networks (during pandemic and in its aftermath) by means of **Ecommerce**. The ecommerce companies are increasingly building more sustainable logistics networks that promise to last for centuries. To date, the deployment of new logistics infrastructure, which is based on fibre optic networks, has become more diversified in network coverage than the technical innovation itself. The benefit of fibre optic-based Ecommerce is direct for the Transport sector. Such benefit primarily relates to the delivery services that are in logistics. Moreover, the transformation effect of Ecommerce, which builds on fibre optic networks is huge. Conversion of car parking spaces into the deliveries’ warehouses and utilization of previously abandoned open spaces for out-of-town storages is in progress. Else, underground car parking spaces are being converted into ‘last mile logistics hub’. Such fibre optic networks-based new logistics activities regenerate mass employment whilst they serve as innovative epicenters of renewed economic growth.
* One other way is through exploring international practices of world’s regions as applied to the **Road and Belt Initiatives** (BRI), which is central for ECO in the Belt’s functioning as both: a Transport Network as a Fiber Optic Network. Through its close connectedness to world’s other regions, the BRI has this summer installed one other fiber optic link. Thus, a new undersea fiber optic data cable, since this summer, links Europe and Latin America via BRI. The aim of the link is to strengthen cooperation between the EU, Japan, US, and India to support both, the **Digital and Transport infrastructures** of low and middle-income countries. The BRI’s fibre optic cable link is not just about infrastructure but it is about the set of standards. It is less the physical roads but more of the digital highways. The latters are prone to fuel regulatory disparities therefore it is important to standardize and harmonize.

Moreover, the BRI, since its launch in 2013, has managed to bring together ECO’s countries via railways, bridges and ports. At global level, the BRI has been endorsed by over 150 states and international organizations. To date, the BRI network encompasses the **Digital Silk Road**, Polar Silk Road and Green Silk Road.

As one of practical steps toward establishing the ECO regional fibre optic network, a study of regulations in the Digital Silk Road and adopting selective provisions for the ECO region should be undertaken.

### Social justification

1. Social benefits for ECO countries from the proposed project will be felt in the increased number of internet users in the ECO region. Thus, in 2019, the use of Internet has reached 51.4% at global level. Today, 75% of global population avails of Internet subscription for mobile broadband. Subscription for fixed broadband increased by over 15%. Internet access has been registered in 57% of individual households.
2. In the ECO context, the incremental growth in Internet use by ECO’s population has registered 12.9 on average over the period 2009-2017 (for details pl. see Table 1 above). Such positive trend in ECO is more or less aligned with the global trend. Yet, there is a need to increase Internet use among ECO regional residents more as there is the opportunity to make it possible through greater harmonized regulation. Ways to avail best use of such opportunity is through creation of norms and regulations for synergy of common ECO efforts in softening the currently stringent regulations on broadband networks access and in transforming to inclusive digital economy and in increasing international intra-access of Internet. In terms of inclusive digital economy, the 58.7% of ECO’s regional population was not accessed to Internet in 2017 (Table 1). The need is to enable this mass of the regional population to have a full fledged access to the broad band Internet access.

In sum, the expected benefits from this project are immeasurable if the adequate regulatory softening of requirements from network operators be obtained. If the social milieu of the ECO region, notably 58.7% of total regional population, will have an access to broad band internet, this achievement will add up to the digital inclusion. This would especially be sensible in the aftermath of Covid-19 pandemic given social distancing real time circumstances.

### Regional rationale

Digital sovereignty is to be strengthened through a greater regional integration under ECO’s framework. Cyber space attacks are increasingly becoming today’s realities of world countries. Given such challenges, the project may bring in a reliable protection in terms of the comprehensive institutional stronghold.

Diagram 1: Evolution of cyber attacks

2010

2014

2016

2018

2018

Cyber theft of credit cards

Cyber-shift from PC to non-PC platforms

Proliferation (Heartbleed, ShellShock)

Online extortion, ransom ware

Fake News, Cyber propaganda

2020

Social engineering, Crypto currency mining malware

In sum, the integrational value of this project in its progressively enhancing the digital sovereignty in ECO region has received all policy support of Member States. If adequately explored and developed, in terms of the needed regulation, the project may add value to ECO’s regional integration under its institutional umbrella.

# Terms of Reference for Specialist to provide the consultancy service

**Brief project profile**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1. Basic data** | | | Project Code: TC/Com/Project-2021 | |
| **Project title** | “*Ways and means to establish and develop ECO regional fiber optic network*” | | **Directorate** | Transport and Communications |
| **Short title** | “ERFON” | | | TC/C/P-2021 |
| **Project Activity** | “Exploring prerequisites for ECO regional fiber optic network” | |  |  |
| **Modality** | *“Functional Methodology of ECO” (1998)*  *“Guidelines for ECO projects” (2013)*  *“Practical Steps for ECO Small Sized Projects”* | |  |  |
| **Focus Countries** | | All members | **Project Participants** | ECO Member States |
| **2. Sector** | | Subsector | **ECO Financing** | |
| Transport & Communications | | Communications | General Reserve Fund (GRF) | |
| **3. Operational Targets**:  (1) Development of solid ECO fiber optic network regulatory base.  (2) Participation in the Digital Silk Road.  (3) Strengthening digital sovereignty. | | | | |
| **Alignment with the UN Sustainable Development Goals** | | | In close consultation with the TC Directorate | |
| SDG 9: “Industry, innovation and infrastructure”. | | | With relevance to the project. | |
| **4. Risk Categorization** | | Low | ECO does not have project risk-related policy. | |
| **5. Safeguard Policies** | | ECO Contingency Policy in the form of selected provisions does not apply. | | |
| **6. Financing** | | |  | |
| Sources | | |  | |
| ECO Secretariat | | | (1) GRF to support Consultancy Service up to US$10,000. | |
| Project Coordinator Organization | | | ECO Secretariat | |
| Project participating countries | | | All Member States | |
| Counterparts | | | 1. ITU 2. BRI organizations | |
| Total: | | | Consultancy Service (US$10,000). | |

## Impact and Outcome

Consultancy Service will target to seek the opportunities and potentials of developing regulatory base for ECO regional fiber optic network.

Consultancy Service will deliver the following Outcomes:

(1) ECO regional fiber optic network instituted.

(2) Ecommerce facilitated via enabling regulatory environment.

(3) ECO’s involvement in Digital Silk Road prepared for.

## Outputs and activities

Consultancy Service will adhere to ECO’s approach encouraging its Member States to consent on setting up Working Group on ECO and Digital Silk Road Framework to prepare for inter-regional and international partnerships that will support the progressive functioning of the ECO regional fiber optic network. In using the above-specified approach, Consultancy Service will deliver the outputs as reflected in Table 2.

Table 2: Outputs expected from Consultancy Service

| **No.** | **Outputs** | **Description** |
| --- | --- | --- |
|  | **Output 1.** | **Development of solid ECO fiber optic network regulatory base.** |
| 1 |  | Output 1.1. Development of Ecommerce facilitating regulation. |
| 2 |  | Output 1.2: Harmonization of radio spectrum use norms and regulations and fiber optic networks access softening requirements. |
| 3 |  | Output 1.3. Development model of the ECO regional fiber optic framework. |
| 4 |  | Output 1.4. Set of regional norms and regulations for ECO regional fiber optic network. |
|  | **Output 2.** | **Participation in the Digital Silk Road.** |
| 5 |  | Output 2.1. Preparing set of promotion measures for access to smart applications/devices. |
| 6 |  | Output 2.2. Development of local content. |
| 7 |  | Output 2.3. Development of regional programme for increasing adult ICT literacy and human capital building. |
|  | **Output 3.** | **Strengthening digital sovereignty.** |
| 8 |  | Output 3.1. Development of the ECO regional digital sovereignty policy. |

*\*Column 1 in the contents of Table 1 indicates the number of activities/assignments.*

Consultancy Service will be paid US$10,000 in the form of installment payments in line with ECO Consultancy payment practices. The ToR is for direct contracting following the recommendations of the 24th Council of Ministers Meeting (8-9 November 2019, Antalya) which are valid for short term bankable project, that are, SSPs. The key points of implementation arrangements are listed hereafter.

### Progress/Implementation Arrangements

The Director of Transport and Communications (TC) will oversee the project developments and the relations and issues related to the consultancy service. Specialist will regularly interact with Director TC. The National Focal Points of ECO Member States assigned by their respective executing authorities in Communications may interact (upon clearance by Director TC) with Specialist on matters relating to the communications sector. Specialist will set online interactive linkages with ITU and BRI-led organizations/entities using, among others, social media platforms (WhatsApp) as convenient for contacts in the framework of execution of the present ToR and deactivate those online linkages within three months after the present ToR will have been fulfilled. The progress arrangements have been summarized in Table 3.

Table 3: Consultancy Service Progress Arrangements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **N.** | **Items** | **Arrangements** | **Period** | **Cost (US** |
| **1.** | Indicative implementation | Consultancy Service Work Plan | December 2021 -February 2022 |  |
| **2.** | Project Progress Monitoring | ECO Secretariat |  |  |
| **3.** | Project Participating Countries | ECO Member States |  |  |
| **4.** | Specialist | Name of Specialist  Address:  Tel:  Email: | 3 person-months |  |
| **5.** | Selection | Selection of Specialist follows the procedures stipulated by *Functional Methodology of ECO* (1998*) and Guidelines for ECO Projects* (2013)for this subject matter. Delivery of outputs to be under present ToR (latter complies with Typical Sample Framework of Small-Sized Project (SSP)). | 0 |  |
| **6.** | Consultancy Service Fees | Total consulting services cost is US$ 10,000/ payable in installments as scheduled below |  |  |

### Monitoring Framework and Performance Indicators of Consultancy Service

The Activities of Consultancy Service will be 8 in total to be fulfilled as specified in Table 3 of the present ToR.

At completion of the study, Consultancy Service will present three (3) key milestone outputs. Reports will be embedded in three deliverables (Inception, Interim and Final).

ECO Secretariat will monitor progress of implementation of Consultancy Service based on 8 key performance indicators (KPIs) and 9 reporting items as specified in Table 4 of the present Terms of Reference.

Table 4: Performance Indicators and Monitoring Framework

|  |  |  |  |
| --- | --- | --- | --- |
| **Outputs** | **Performance Indicators** | **Data sources and reporting** | |
| **Output 1.**Study on the development of solid ECO fiber optic network regulatory base. | **Output 1.1.** Development of a set of recommendations for developing Ecommerce facilitating regulation. | 1. Study report (1). | Inception Report |
| **Output 1.2**: Harmonization of radio spectrum use norms and regulations and fiber optic networks access softening requirements. | 1. Sample Regulation on radio spectrum use norms and regulations (1). |
| 1. Sample Regulation on fiber optic networks access softening requirements. |
| **Output 1.3.** Development model of the ECO regional fiber optic framework. | 1. Model of ECO regional fiber optic network’s framework (1). |
| **Output 1.4**. Set of regional norms and regulations for ECO regional fiber optic network. | 1. Quality assessment and quality control standard for ECO (1). |
| **Output 2.** Participation in the Digital Silk Road. | **Output 2.1.** Formulation of ECO’s non-paper on the framework of the ECO and Digital Silk Road. | 1. Non-paper (1). | Interim Report |
|  | **Output 2.2.** Setting up a Working Group on ECO/Silk Digital Silk Road Framework. | 1. 1st Meeting of the Working Group. |
|  | **Output 2.3.** Approval and dissemination/display of the ECO and Silk Road Digital Framework. | 1. Approval and inclusion in ECO Work Programme. |
| **Output 3.** Strengthening digital sovereignty. | **Output 3.1**. Developing ECO’s digital sovereignty policy. | 1. Policy Paper (1). | Final consolidated report (Inception + Midterm) |

**Individual Work Schedule**

Specialist is expected to commence the specified assignments under the present Terms of Reference, immediate to singing the contract for the duration of the three months.

Payments are to be affected once successful completion is obtained as well as upon review/quality assurance of Consultancy Service’s outputs and deliverables as specified in the present ToR. Deliverables must be submitted by Specialist to Director TC of the ECO Secretariat and certified by the latter and Project Management Section (PMS) as being of adequate quality and satisfying specified terms under the said ToR.

**Payment Schedule**

Invoices for payments may be submitted as and when completed but indicative delivery dates are advised as below (Table 5). Completion of all deliverables is expected to last three months. The below payment schedule and its workload breakdown follows the ECO practices as customized for similar studies fulfilled by consultancy services of other Directorates of the ECO Secretariat.

Table 5: Payment schedule for Specialist

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Payments of consultancy fees** | **Targeted (Indicative) Deliverables Date** | **Outputs and Deliverables**  Outputs as per Table 4: |
|  | 40 % of total contract value | At commencement of contract | * Inception report (Output 1). |
|  | 30 % of total contract value | After 1-2 month | * Interim Report (Output 2) |
|  | 30 % of total contract value | Upon completion of the Report | * Final Report (Output 1, 2, and 3). |

*\*In submitting invoices for deliverables other than ones mentioned in the Terms of References, such other tasks should be presented to Director TC with a copy to PMS.*

In confirming an expression of interest for herewith specified Consultancy Service, Specialist may be requested to prepare a counter offer with budget proposal covering:

1. Consultancy Fees. N.B.: Offer may be submitted for restructuring/adjustment, if any, prior to an act of singing the contract.

# Conclusion

In the post coronavirus working environment as well as at present, most of the global community has shifted to digital means of communications. Under the circumstances of yet persisting pandemic, the need is increasing for digital communications to be inclusive.

That signals of an economically strong form of market niche opened for the Communications. The present ToR has described key highlights necessitating the utilization of the aforementioned opening in global market for Communications via the ECO fiber optic network. For the latter to happen, the regulatory base is first needed to framework progressive activities along this chosen path.

Specialist may structure the subject study along specifications of the ToR availing of ECO’s approaches, policies, guidelines and standards.

Core pillars of ECO’s Vision on the Communications should not be missed out, especially on providing access to broadband. In this, a central integration-driving role of ECO regional fiber optic network is crucial.

# Signature

|  |  |
| --- | --- |
| **For Specialist**: | **For ECO Secretariat**: |
|  |  |