Information Document to GCBI

ITU Activities in Capacity Building: November 2015

1. **Purpose**

This document is submitted to the Group on Capacity Building Initiatives, (through the Chair of the Group,) by the Human Capacity Building Division (HCB), within the Projects Support and Knowledge Management department of the BDT.

The purpose of this document is to update the group on the main capacity-building activities being undertaken by the HCB division, as well as highlight developments since the last meeting of the group.

2. **Capacity Building Activities Undertaken by HCB**

2.1 Development of Training Materials

(i)   Spectrum Management Training Programme (SMTP)

Work on the development of the Spectrum Management Training Programme (SMTP) consists of 15 modules classified as Basic and Advanced. 14 of these modules have been developed, peer-reviewed and finalised.

One Module will be delivered soon, the Elective Module 2.3 on Terrestrial TV Broadcasting Planning and Digital Transition. The SMTP modules are shown below:

> OM1 - Legal basis and regulatory framework of spectrum management
> OM2 - Spectrum engineering fundamentals
> OM3 - Wireless telecommunication technologies
> OM4 - Economic and market tools of spectrum management
> OM5 - Strategic planning and policies for wireless innovation.
> EM1.1: Spectrum monitoring
> EM1.2: Enforcement and type approval of equipment
> EM1.3: SM for satellite systems
> EM1.4: SM for HF systems, science, maritime and amateur services
> EM1.5: SM for aeronautical and radio determination services and military systems
> EM1.6: Computer-aided spectrum management
> EM2.1: (Legal Specialization): Advanced spectrum authorization regimes
> EM2.2: (Legal Specialization): Socio-economic impact of spectrum regulation; competition
>   and consumer protection
> EM2.3: (Technical Specialization): Terrestrial TV broadcasting planning and digital
>   transition
> EM2.4: (Technical Specialization): Opportunistic spectrum access and cognitive radio.

A pilot of the SMTP Obligatory Module 1: "Legal Basis and Regulatory Framework of Spectrum Management" was successfully run online from December 2014 to February 2015 with a total of 40 participants from all the regions.

An SMTP promotion video has been produced and will be shown at the end of the HCB presentation to GCBI

A lot of interest has been expressed on SMTP by training institutions and universities, to offer the SMTP either as standalone modules, part of their already established programmes or offer the complete programme and award an academic degree in spectrum management to learners who completes all modules and a University thesis. Students who take on SMTP are eligible for ITU professional certificates. ITU and Czech Technical University will soon sign a Corporation Agreement and project document for implementation of the SMTP.

An overview module is being developed to cater for individuals at senior level positions who require only a broad overview of the topic. The module is intended to be a consolidation of the salient features of the other modules.

(ii)   Quality of Service Training Programme (QoSTP)

Development of the Quality of Service Training Programme (QoSTP) consists of 13 Modules organized into study tracks based on the required specialization and level of immersion (Basic, Medium or Advanced level)

> OM 0: Overview Module
> OM 1: Introduction - Quality of Service and Quality of Experience
> OM 2: Subjective assessment of voice quality
> OM 3: Objective assessment of voice quality
> OM 4: QoS and QoE for Multimedia and assessment methods
> OM 5: Regulatory Aspects of QoS
> EM 1.1: Telephonometry
> EM 1.2: Network Performance Measurement
> EM 1.3: OAM for Performance Measurement
> EM 2.1: Hands-free communication and user interfaces in vehicles
> EM 2.2: Traffic management
> EM 3.1: QoS for mobile services
> EM 3.2: Bitrate measurement of Internet connections

11 modules have been developed and peer reviewed. The submission of the final materials by the experts is on-going, with 6 modules already submitted.

The module on Regulatory Aspects of QoS (OM5) is still under development. This module was recommended as a result of the peer-review process hence the late commencement of its development.

The overview module is to be developed when all the other modules have been finalised as it is intended to be a consolidation of the salient features of the other modules. Therefore the development of this module is pending the conclusion of the Regulatory Module.

(iii)   ICT & Climate Change Training Programme (ICT&CCTP)

Work on development of training materials on ICT and Climate change has commenced with the scoping of the course structure. Engagement of Experts to develop the materials has commenced. Modules to be developed for this programme are:

- OM: Overview Module.

Foundation Modules
- FM1: Introduction to ICT & Climate Change.
- FM2: Roles of Stakeholders in ICT & Climate Change.
- FM3: Developing ICT Service Provider Strategies.
- FM4: Assessing the Impact of ICT on Climate Change.
- FM5: Applying Green ICT Strategies.
- FM6: E-waste and the Circular Economy.

Advanced Modules

- AM1 : The Global Picture: Climate Modelling, Monitoring and Frameworks for GHG Emissions Reduction
    Option 1:   Climate Modelling
    Option 2:   The role of Satellite & Radio Communication in Environmental Modelling
    Option 3:   Global/Regional Frameworks for GHG Emissions Reduction

- AM2: Understanding the range and types of Stakeholders
    Option 1: Policy Makers & Regulators
    Option 2: TSPs and IT Service Providers

- AM3: ICT Service Provider Strategies in Depth
    Option 1: Telecom Service Provider (TSP) Strategies
    Option 2: IT Service Provider Strategies (including Cloud Services)
    Option 3: Adaptation for Infrastructure Providers

- AM4: Life Cycle Assessment
    Option 1:   How to carry out a full LCA
    Option 2:   How to assess the Carbon Footprints of Sectors, Countries and Regions

- AM5: Green ICT Strategies in different sectors
    Option 1: Improving the Energy Efficiency of ICT Products and Services
    Option 2: GHG reductions in the Power Sector
    Option 3: Decarbonising Transport
    Option 4: Smart & Sustainable Cities

- AM6: The End-of-Life Stage in Life Cycle Assessment

(iv)   Other Programmes being Developed Within the Framework of the ITU Academy

Other ITU departments continue to develop new programmes under the framework of the ITU Academy. Quality assurance guidelines have been developed to guide the alignment of new and existing materials with the ITU Academy quality standards. The programmes that are being developed under the framework of the ITU Academy are:

a) Smart Sustainable Cities (developed with the Asia Pacific CoE)
b) Two Modules on:
   - Economics of Broadband and ICTs.
   - ICT network Deployment and Operation. (with funding from Inter-American Development Bank)
c) Accessibility

In liaison with the respective Focal points, review of existing training materials in Conformance and Interoperability is also taking pace to ensure that these materials conform to ITU Academy standards of quality.

2.2 Capacity Building Through Partnerships

The ITU Academy's efforts to reach a wider scope of stakeholders through partnerships with academia, international organizations, private sector, Centres of Excellence and other training providers is on-going.

(i)   ITU-R&S
Training programmes in spectrum management are run in collaboration with Rhode & Schwarz under this agreement:

(ii)   ITU-ICTP
Training programmes in wireless networking are run in collaboration with ICTP.

(iii)   ITU-ITSO
Satellite communication training supported by BR has been conducted under this agreement.

2.3 Capacity Development Symposium

BDT is in the process of preparing for the Global ICT Forum on Capacity Development (Capacity Development Symposium). This Forum will be held in the third quarter of 2016. Kenya has agreed tentatively to host the forum. This high-level event brings together top level executives dealing with

human capacity building to discuss and address key human and institutional capacity development challenges arising from the developments in the sector.

A concept note and a draft programme are being developed and will be shared with the Group once they are ready. It is envisaged that the discussions for this meeting will form a greater part of the input into the forum and that the GBCI will play an active role in making this Global event a success.

3. Highlights of Developments Since the October 2014 Meeting

3.1 Implementation of the New CoE Strategy

(i)   Meeting of the GCBI of the 17th October 2014 endorsed recommendations for CoE's from the selection process in which regional GCBI representatives participated.

On the 27th October, 2014 the Director, BDT approved the recommendations of the GCBI and wrote to all CoE's, those that were successful as well as those that were not selected

(ii)   A list of the 32 selected CoE's is attached to this document as Annex 1

(iii)   Out of the 32 selected CoE's, 26 have signed a corporation agreement. Six CoE's have not signed the corporation agreement yet, 1 CoE in the Arab region, 3 in Asia Pacific region and 2 in Africa.

(iv)   Steering Committee meetings for 2014 were conducted as follows:

Region	Venue	Date	Host
AFR	South Africa	4-6 February 2015	Telkom, SA
AMS	Brazil	25-27 February 2015	National Telecommunication Agency
ARB	Sudan	4 December 2014	SUDACAD
ASP	Thailand	16-17 February 2015	TOT Academy
CIS	Republic of Moldova	30 March 2015	ONAT
Europe	Denmark	11 February 2015	European Communication Office

(v)   As part of continued support to CoE's and in pursuit of encouraging high quality and excellence in delivery, the following activities have been achieved:
- Development of standardized templates to guide implementation of actions
- ITU Academy platform upgrade
- Development of a coordinators guide on the use of the upgraded platform
- Development of an Instructors manual to support maximal use of the new platform features
- Development of plaques for each CoE, to be displayed at the CoE premises and returned to ITU when/if the CoE ceases to be an ITU Centre of Excellence

3.2 ITU Academy Platform Upgrade

3.2.1 The ITU Academy platform underwent a major upgrade over the past year. The main objective of the upgrade was to enhance the performance of the platform in order to improve the quality of service and experience offered to ITU members and ITU Academy platform users. The migration to the new platform took place on 26 May 2015.

The upgrade has resulted in new features and functionalities being added to the platform, resulting in its enhanced performance. Among the new features on offer to users are the following:

- Payment driven course enrolment
- Secure online course payment, using debit and credit cards;
- Enhanced features for generation of invoices for payments through wire transfer;
- Enhanced user management (user accounts, forums, chats, user dashboards);
- Automatic generation of certificates at the end of a training course;
- Automatic generation of grading reports;
- Tracking of student course history using the student's profile;
- Creation and management of communities;
- Easy management of content publishing and repository;

3.2.2 A number of courses have been successfully run on the upgraded platform and it is now being optimised.

- The Moddle platform is now being further upgraded from 2.6 to 2.9
- The course structure is being customised to accommodate mega-course structure

3.2.3 To support the regional coordinators and the CoE's with the new functions of the platform, Guidelines to regional coordinators have been developed and shared with the coordinators. An instructor's manual is also being developed and will be shared with the CoE's as soon as it is finished.

3.2.4 A page has been created that is dedicated to the GCBI and its work on the new platform. The page can be accessed at the below link
https://academy.itu.int/index.php?option=com_content&view=article&id=103&Itemid=630&lang=en

3.3 Partnerships

(i) ITU-UKTA

In June 2015, ITU signed a Corporation Agreement with United Kingdom Telecommunications Academy, for the delivery of a joint "online Master of Communications Management" training programme. This partnership is expected to respond to the need of ITU membership for capacity building programmes that improve managerial skills and competencies of the professionals and executives who are working in the ICT sector.

(ii) ITU-CTU

Discussions for a Corporation Agreement between ITU and Czech technical University (CTU) for the delivery of the spectrum management training programme are at an advanced stage. The agreements is based on three options for delivery of the SMTP, where CTU will offer SMTP modules as stand-alone modules, or as part of already existing CTU programmes or offer the SMTP as a complete programme resulting in the award of a university degree.

4. Conclusion

In pursuit of the WTDC-14 objective 4 to build human and institutional capacity, and the ITU Academy Framework's objective to harmonise integrate and gather under one umbrella all existing ITU training services corresponding to the organizations main areas of activity, HCB division continues to:

- develop new flagship programmes and engage potential partners for the delivery of these programmes;
- support CoE's in the delivery of their planned actions;
- continuously optimise the ITU Academy platform;
- pursue strategies to enhance engagement of Academia in the capacity building work of ITU; as well as
- provide platforms for dialogue and knowledge exchange in capacity building through regional and global forums.

These efforts can be fully realised through the guidance and continued support of the GCBI which is the advisory body on initiatives, academic alliances and partnerships that further the overall strategic objectives of the ITU Academy.

Annex

Africa	Americas	Arab	Asia-Pacific	CIS	Europe
Digital Bridge Institute (DBI), **Nigeria** Policy and Regulation	Instituto Nacional de Investigación y Capacitación de Telecomunicaciones – Universidad Nacional de Ingeniería (INICTEL UNI), **Peru** Broadband Access	Institut National des Postes et Télécommunications (INPT), **Morocco** Policy and Regulation	TOT Academy – Ministry of Information and Communication Technology (MICT),**Thailand** Policy and Regulation; Broadband Access	Odessa National Academy of Telecommunications (ONAT), **Ukraine** Policy and Regulation; Digital Broadcasting	Czech Technical University in Prague, Faculty of Electrical Engineering (CTU);**Czech Republic** Cybersecurity
Ecole Supérieure Multinationale des Télécommunications (E.S.M.T), **Senegal** Broadband Access; Digital Broadcasting	Universidad Nacional de la Plata (UNLP), **Argentina** Cybersecurity	The Center of Information, Training, Documentation, and Studies in Communication Technologies (CIFODE'COM), **Tunisia** Broadband Access	National Information Society Agency (NIA), **Republic of Korea** Policy and Regulation	Kyrgyz State Technical University (KSTU), Kyrgyz**Republic** Broadband Access; e-Waste	Faculty of Electrical Engineering and Information Technologies, Ss. Cyril and Methodius University in Skopje (FEEIT);**The Former Yugoslav Republic of Macedonia** Broadband Access
Ecole Supérieure Africaine des Technologies de l'Information et de la Communication (ESATIC), **Côte d'Ivoire** Cybersecurity	Centro de Investigación y Desarrollo en Tecnologías de la Información y las Comunicaciones (CINTEL), **Colombia** Spectrum Management	Centre d'Etudes et de Recherche des Télécommunications (CERT), **Tunisia** Conformance and Interoperability	Advanced Level Telecoms Training Centre (ALTTC),**India** Broadband Access	Moscow Technical University of Communications and Informatics (MTUCI),**Russian Federation** Cybersecurity; ICT Applications and Services	National Institute of Telecommunications (NIT); **Poland** Capacity Building in Internet Governance
University of Rwanda, College of Science and Technology (URCST),**Rwanda** Cybersecurity	Instituto Nacional de Telecomunicações (INATEL),**Brazil** Digital Broadcasting	National Telecommunication Institute (NTI), **Egypt** Spectrum Management	The International Multilateral Partnership Against Cyber Threats (IMPACT), **Malaysia**		Technische Universitat Chemnitz (TUC);**Germany** Cybersecurity; Broadband Access

			Cybersecurity		
Centre for Learning, Telkom SA, **South Africa** ICT Applications and Services	Centro de Capacitación en Alta Tecnología para Latino América y el Caribe (CCAT LAT), **Argentina** ICT Applications and Services	Sudatel Telecommunications Academy-SUDACAD,**Sudan** ICT Applications and Services	China Academy of Telecommunications Research (MIIT),**China** Conformance and Interoperability		Institute for Technology and Quality (ISQ), **Portugal** e-Waste; Conformance and Interoperability
African Advanced Level Telecommunications Institute (AFRALTI),**Kenya** Spectrum Management; Broadband Access	Centro Internacional de Investigación Científica en Telecomunicaciones, Tecnologías de la información y las comunicaciones (CITIC),**Ecuador** ICT and Climate Change Mitigation and Adaptation	Telecommunications Regulatory Authority (TRA),**Bahrain** Capacity Building in Internet Governance	State Radio Monitoring Centre (SRMC), **China** Spectrum Management		