

CONNECT
ASIA-PACIFIC
2013

**PROJECTS
AND INITIATIVES**

**MAKING A DIFFERENCE IN
THE ASIA-PACIFIC REGION THROUGH ICTs**



CONNECT
ASIA-PACIFIC
2013

PROJECTS AND INITIATIVES

MAKING A DIFFERENCE IN
THE ASIA-PACIFIC REGION THROUGH ICTs



For further information

Please contact:

International Telecommunication Union (ITU)
Telecommunication Development Bureau (BDT)
Place des Nations
CH-1211 GENEVA 20

Telephone : +41 22 730 5111

Fax: +41 22 730 5484

Email : connect-asp@itu.int

Website: <https://www.itu.int/en/ITU-D/Conferences/connect/Asia-pacific>

© ITU 2013

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

Foreword

I am pleased to present a portfolio of projects submitted by ITU Member States and other development partners for consideration by the ITU Connect Asia Pacific Summit to be held in Bangkok, Thailand 18 November 2013.

This Summit presents a unique opportunity for the region to map strategies on advancing the deployment of information and communication technologies social and economic development. The Summit creates a platform for discussion and partnership-building by governments, international organizations, private sector, development banks, and non-governmental organizations. The bouquet of projects presented here represents pillars for the Information Society. If implemented, the projects will contribute

to the eradication of extreme poverty and hunger, achievement of universal primary education, promotion of gender equality and empowerment of women, reduction of child mortality, improvement of maternal health to combat HIV/AIDS, malaria and other diseases, ensuring environmental sustainability, public safety, and development of global partnerships for sustainable development.

The Asia and the Pacific region have made very positive progress in terms of introducing new technologies such as broadband, and attaining improved connectivity. The Summit provides an opportunity to translate into action the commitment of the Heads of State and Government who have consistently demonstrated political will in making information and communication technology the tool of choice as countries strive to create a better life for the citizens.

I call upon our development partners to seize this opportunity and finance the projects herein proposed for a win-win outcome. As ICTs belong to one of the fastest growing sectors, the private sector is thus assured of getting return on investment while countries will advance their development agendas, and the population will enjoy cheaper and high quality ICT services and applications.

ITU supports all these projects and will actively contribute towards their successful implementation.



A handwritten signature in blue ink, which appears to be 'H. Touré'.

Dr Hamadoun I. Touré
ITU Secretary-General

Overview

The Connect Asia-Pacific Summit builds on the success of four such preceding events: Connect Africa 2007, Connect CIS 2009, Connect Arab 2012, and Connect Americas 2012. The Summit comes at an opportune time. First, the fifth World Telecommunication Development Conference (WTDC-10) of the International Telecommunication Union (ITU) which was held from 24 May to 4 June 2010 in Hyderabad, India adopted the Hyderabad Action Plan. The Action Plan adopted five Asia and the Pacific Regional Initiatives which are intended to address specific telecommunication/information and communication technology (ICT) priority areas, through partnerships and resource mobilization to implement small, medium and large scale projects. The following are the identified priority areas:



- Unique Needs of Least Developed Countries, Small Island Developing States, and Landlocked Developing Countries;
- Emergency Telecommunications;
- Digital Broadcasting;
- Broadband Access and Uptake in Urban and Rural Areas;

Second, both the review of the implementation of the Millennium Development Goals (MDGs) and the outcomes of the World Summit on the Information Society will be up for review in less than two years i.e. in 2015.

Third, the Asia-Pacific region has just held the Regional Preparatory Meeting in Cambodia which was held in Phnom Penh, Cambodia from 30 April to 2 May 2013.

Fourth, the Asia and the Pacific is now home to some of the most advanced economies in terms of ICTs and it is the largest regional ICT market. Key ICT services and uptake have increased throughout Asia and the Pacific, the world's most populous region in world, which is also the most diverse region in terms of income levels and ICT uptake and use. Despite high-growth and record absolute numbers, penetration rates of ICTs in the region are lower than those of the world.

In coming up with this publication, our attempt is to highlight the importance of implementing the priorities of the region and to hasten the region's pace towards the establishment of an Information Society. Through close consultations with the Member States in the Region and other stakeholders, I am pleased to submit these interesting projects as an input to the Summit. I note with much satisfaction, that submissions were received from diverse entities that included Member States, Regional Organizations, United Nations Organizations, Private Sector, etc.

As development partners converge in Bangkok, these documents will provide an insight or glimpse into investment opportunities in the telecommunication/ICT sector. Based on our experience with the Asia-Pacific region as well as other regions, the figures given are indicative and not conclusive.

It is my fervent hope that development partners will sit to negotiate and conclude bilateral and multilateral agreements aimed at co-financing some of these projects. Let me assure you that ITU is ready to play a catalytic role to ensure that ICT play a pivotal role in the region's development efforts.

Thank you.



Brahima Sanou
Director, Telecommunication Development Bureau

Message

of

Mr. Toshiyuki Yamada

Secretary General, Asia-Pacific Telecommunity

The Asia-Pacific region, which is home for over 4 billion people and even larger number of devices, is poised for further ICT growth in this broadband era. The diversity of the region in terms of its socio-economic development, geography, language and demography, poses tremendous challenges while providing great opportunities for development and business partnerships. The Connect Asia-Pacific Summit is appropriately timed, as we need to look beyond just ICT infrastructure deployment and work towards building a digital society that would harness the full potentials of ICTs for improving the quality of lives for the people.



Increasingly, we are pleased to see initiatives and innovations by the countries in the region to leverage ICTs, not only for commercial purposes but also to propel socio-economic development through job creation, universal education, healthcare enhancement, enhanced efficiency in agriculture, creating energy efficient and smarter cities to name a few. There are also challenges of security and privacy that require redressal. It is quite clear that ICT infrastructure and services in coming years require partnerships involving private sector, public institutions and the people.

This Summit is aimed at helping to mobilize the human, financial and technical resources needed to provide the broadband connectivity to the wider population and to strengthen the role of ICT as the innovative and creative engine powering economic prosperity and sustainable development in the Asia-Pacific region. I am sure that joining this Summit will enable all stakeholders from the Asia Pacific region to work together and this would be a big step towards further development of ICT in this region. The Asia-Pacific Telecommunity is pleased to be part of this initiative by the International Telecommunication Union and will be continuing its efforts to enhance the ICT development in the Asia-Pacific region through its membership in collaboration with the stakeholders.

Acknowledgement

Projects and Initiatives: Making a Difference in the Asia-Pacific Region through ICTs was prepared as an input document for the Connect Asia-Pacific Summit (Bangkok, Thailand 18 November 2013). The publication was prepared by the Project Support and Knowledge Management Department within the Telecommunication Development Bureau (BDT) of ITU, in coordination with the ITU Asia-Pacific Regional Office and other Departments in the BDT. Project proposals were submitted by ITU Member States from the Asia-Pacific Region, ITU staff who developed documents in line with the Regional Initiatives for the Asia-Pacific Region that were adopted by the fifth World Telecommunication Development Conference (Hyderabad, 2010), and by other development partners.

The work was carried out under the overall direction of Eun-Ju Kim, Regional Director of the ITU Regional Office for the Asia-Pacific, and Cosmas Zavazava, Chief of Project Support and Knowledge Management Department in the Telecommunication Development Bureau.

The work undertaken by ITU staff in the Project Support Division, staff at the ITU Regional and Area Offices in the Asia-Pacific Region, Focal Points in Headquarter, IT Support Service and Publication Composition Service is also hereby acknowledged.

Table of contents

	<i>Page</i>
1. Building Networked Communities for Future Generations: Infrastructure Development	3
Broadband Networks in the Asia-Pacific Region.....	7
Connecting Schools - Countries in the Asia-Pacific Region: Connecting the Unconnected Communities.....	9
Harmonized ICT Conformance and Interoperability Programmes in Asia-Pacific Region	13
ICT Infrastructure, Applications and Services	17
Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	21
Non-Ionizing Radiation (NIR) and Health Protection	25
Connecting Greater Mekong Sub region (GMS)	29
Promoting Transformational Power of Broadband - “Connecting at the Roots”	33
To establish National Broadband Services Network (NBN) with the help of Public & Private Partnership (PPP) using Social Obligation Funds (SOF).....	37
Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	39
Mapping the pan Asia-Pacific information superhighway and closing gaps in infrastructure connectivity.	41
Support for IP-based Infrastructure development in Asia Pacific.....	43
Develop Satellite Service Framework	45
Regional Broadband Through WiFi Hotspots Co-located with Rural GSM towers Throughout the Solomon Islands.....	47
Study on the Relationship between Broadband and Social-Economic Development in Rural Area	49
Cooperation on the GMS Information Superhighway Project (Phase II)	53
China-Laos Cooperation on TD-LTE Wireless Broadband Demonstration Project.....	55
2. Creating a pro-ICT Growth Environment.....	59
Asia and the Pacific Center for Information Society Statistics (APCISS)	63
e-Accessibility for Persons with Disabilities in the Countries of the Asia-Pacific Region.....	67
Internet Reduction Cost Through IXPs in the Asia Pacific Region.....	73
Development Programme for National Computer Incident Response Teams (CIRTs)	75
The Child Online Protection (COP).....	79
Disseminating Cybersecurity Culture and Combating Cyber Threats in Asia Pacific Region	83
Human Capacity Building in the Asia Pacific Region	85
South Asian Internet Exchange Network (SINX)	89
Development of Local Text-to-Speech (TTS) and Electronic Publishing for Persons with Disabilities... ..	93
Harmonizing Short Range Devices (SRDs) for efficient and affordable lifestyle.....	97
E-Health Opportunities: Leveraging ICTs in Asia-Pacific	99
Fostering ICT Development by building human capacity in Asia-Pacific Region	101
Harnessing and Preserving National Heritage and Cultural Legacy through ICTs.....	105
m-Powering Through Mobile Broadband	107
Empowerment Through Bridging Languages, Applications and ICT : Localization in Lao PDR	109

	<i>Page</i>
Establishment of National ICT Indicators and Statistics Portals	113
ASEAN Regional Internet Traffic Exchange Network	115
Formulation of blueprint for implementation of a common online authentication model	119
ICTs for Agriculture: the e-Agriculture Strategy Toolkit	121
Development Programme for National Computer Incident Response Teams (CIRTs)	127
ICT Infrastructure, Applications and Services - Mongolia	129
Enhancing National Capacities on Monitoring and Evaluation of ICT-Integrated Learning Environments (Phase 1)	131
Use of ICTs to Preserve and Celebrate Endangered Local Languages and Cultures	135
Formulation of Telecom Competition Regulation	141
Research Study on Best Practices in Broadband Dispute Resolution	143
Empowering Citizens Through Digital Literacy	145
Formulation of eGov Policy - Bhutan	153
MIIT/ITU Joint Seminar on ICT Policy and Regulatory Issues.....	155
The Development of Information and Communication Technology and Assistive Technology for Equitable Society	157
The Development of Master Model for Smart Community in Thailand	159
3. Making a smooth transition from analogue to digital broadcasting.....	163
Support for Transition from Analogue to Digital Broadcasting	167
Sustainable and Efficient Spectrum Management for ICT Development in Asia-Pacific	171
Enhancing and stimulating innovation through the use of Amateur band	173
Asia-Pacific Regional Symposium for Broadcasting Regulators and the Industry & Media Innovation Awards	175
Convergence in Digital Broadcasting	179
Pacific Spectrum Management Harmonization	181
Spectrum Management	185
Automated Spectrum Management System - Bhutan.....	187
Integrated National Spectrum Management and Monitoring System	189
4. Saving Lives and Preserving Our Planet: Emergency Telecommunications and Climate Change	195
Emergency Telecommunications and Climate Change.....	199
Satellite Rural Communications Capacity Solutions for LSE	201
ICTs and Promoting Road Safety in the Asia Pacific Region.....	205
ICT & Improving Road Safety in Bhutan.....	207
Use of Broadband to Provide for Enhanced Monitoring of Dangerous Multi Hazards and Enhanced Disaster Management	209
ICTs and Promoting Road Safety - Cambodia	213
Satellite Based Telecommunications System for Disaster Management and Climate Change Applications for the South Pacific Island Nations.	215

	<i>Page</i>
5. Addressing Unique ICT Needs of Least Developed Countries, Small Island Developing States and Landlocked Developing Countries	219
Low-Cost Computing Devices and e-Educational Content for Schools.....	223
Catalyzing ICT Use for Digital Development	225
"Connect a School; Connect a Community" in Lao P.D.R.	227
ITU International ICT Volunteers (IIVs)	231
Digital Inclusion for ALL	235
Connect School; Connect a Community for Sustainable Development in Myanmar	237
Developing a Regional Model for Electronic Cause of Death Integrated Reporting System (eCODIRS)	241
Using Innovation, Technology and Media as Effective Tools in the Fight Against the Illicit Trafficking of Cultural Property	247
Youth Mobile - Engaging Young People to Develop the Next Generation of Mobile Apps for Sustainable Development and Job Creation.....	249
"Connect a School; Connect a Community" & e-NABLE Projects in Sri Lanka	251
Strengthening ICT and Telecom Sector in Bangladesh Through Capacity Development of Stakeholders (STIB).....	255
Implementation of Bhutan CIRT	259
Application System to Manage/Maintain Community Centers - Bhutan	263
Empowering Farmers Through Connecting to Market Through ICT (Internet and Mobile Phone).....	265
Improving the Collection of ICT Statistics for Development, in Asian LDCs and Pacific SIDS.	269
"Connect School; Connect a Community" in Democratic Republic of NEPAL	273
Samoa Cyber Security	277
Regional Distance Learning Centres for Solomon Islands National University (SINU).....	279
Harnessing and Preserving National Heritage and Ancient Cultural through ICTs	281

Projects summary tables

1. Building Networked Communities for Future Generations: Infrastructure Development			
Code	Project Name	Source	Estimated Budget '000 USD
1.01	Broadband Networks in the Asia-Pacific Region	ITU	42,000,000
1.02	Connecting Schools- Countries in the Asia-Pacific Region: Connecting the Unconnected Communities	ITU	20,000
1.03	Harmonized ICT Conformance and Interoperability Programmes in Asia-Pacific Region	ITU	27,000
1.04	ICT Infrastructure, Applications and Services	ITU	30,000
1.05	Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	ITU	100,000
1.06	Non-Ionizing Radiation (NIR) and Health Protection	ITU	1,630
1.07	Connecting Greater Mekong Sub region (GMS)	ITU	10,000
1.08	Promoting Transformational Power of Broadband - "Connecting at the Roots"	MCMC & ITU	80
1.09	To establish National Broadband Services Network (NBN) with the help of Public & Private Partnership (PPP) using Social Obligation Funds (SOF)	Bangladesh Telecommunication Regulatory Commission	1,250
1.10	Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	Information technology, post and telecommunications authority, the Government of Mongolia	60
1.11	Mapping the pan Asia-Pacific information superhighway and closing gaps in infrastructure connectivity.	UNESCAP & ITU	1,000
1.12	Support for IP-based Infrastructure development in Asia Pacific	Asia Pacific Network Information Centre (APNIC)	200
1.13	Develop satellite service frame work	Bhutan InfoComm & Media Authority (BICMA)	100
1.14	Regional Broadband through WiFi hotspots co-located with rural GSM towers throughout the Solomon Islands	Solomon Telekom	1,000

1.15	Study on the Relationship between Broadband and Social-Economic Development in Rural Area	China Academy of Telecommunication Research, Ministry of Industry and Information Technology	280
1.16	Cooperation on the GMS Information Superhighway Project (Phase II)	MIIT of China	17,000
1.17	China-Laos Cooperation on TD-LTE Wireless Broadband Demonstration Project	MIIT of China	5,000
		Total	42,214,600

2. Creating a pro-ICT Growth Environment			
Code	Project Name	Source	Estimated Budget '000 USD
2.01	Asia and the Pacific Center for Information Society Statistics (APCISS)	ITU	521,000
2.02	e-Accessibility for Persons with Disabilities in the Countries of the Asia-Pacific Region	ITU	1,500,000
2.03	Internet reduction cost through IXPs in the Asia Pacific region	ITU	17,400
2.04	Development Programme for National Computer Incident Response Teams (CIRTs)	ITU	2,700,000
2.05	The Child Online Protection (COP)	ITU	2,000,000
2.06	Disseminating Cybersecurity Culture and Combating Cyber Threats in Asia Pacific Region	ITU	480
2.07	Human Capacity Building in the Asia Pacific Region	ITU	61,500
2.08	South Asian Internet Exchange Network (SINX)	ITU	20,000
2.09	Development of Local Text-to-Speech (TTS) and Electronic Publishing for Persons with Disabilities	ITU	10,000
2.10	Harmonizing Short Range Devices (SRDs) for efficient and affordable lifestyle	ITU	200
2.11	E-Health Opportunities: Leveraging ICTs in Asia-Pacific	ITU	10,000
2.12	Fostering ICT Development by building human capacity in Asia-Pacific Region	ITU	950
2.13	Harnessing and Preserving National Heritage and Cultural Legacy through ICTs	ITU	2,000
2.14	M-powering through mobile broadband	ITU	450
2.15	Empowerment through Bridging Languages, Applications and ICT Localization of ICT Applications in Lao PDR	ITU	500
2.16	Establishment of National ICT Indicators and Statistics Portals	ITU	2,000
2.17	Asean Regional Internet Traffic Exchange Network	ITU	10,000
2.18	Formulation of blueprint for implementation of a common online authentication model	Ministry of Information & Communications-Bhutan	25
2.19	ICTs for agriculture : the e-agriculture strategy toolkit	FAO & ITU	5,000
2.20	Development Programme for National Computer Incident Response Teams (CIRTs)	Information Technology, Post and Telecommunications Authority of the Government of Mongolia	30,000

2.21	ICT Infrastructure, Applications and Services - Mongolia	Information Technology, Post and Telecommunications Authority of the Government of Mongolia	30,000
2.22	Enhancing National Capacities on Monitoring and Evaluation of ICT-Integrated Learning Environments (Phase 1)	UNESCO Bangkok	125
2.23	Use of ICTs to preserve and celebrate endangered local languages and cultures	Prime Minister's Office (PMO), Office of the Chief Information Officer (OGCIO); and the Telecommunications and Radiocommunications Regulator (TRR).	750
2.24	Formulation of Telecom Competition Regulation	Department of IT & Telecom , Ministry of Information & Communications	30
2.25	Research study on best practices in broadband dispute resolution	Consumers International	500
2.26	Empowering Citizens through Digital Literacy	UNESCO & ITU	2,500
2.27	Formulation of eGov Policy	Ministry of Information & Communications	30
2.28	MIIT/ITU Joint Seminar on ICT Policy and Regulatory Issues	Ministry of Industry and Information Technology-China	40
2.29	The Development of Information and Communication Technology and Assistive Technology for Equitable Society	Ministry of Information and Communication Technology, ICT Usage Promotion and Development Bureau, Thailand	148
2.30	The Development of Master Model for Smart Community in Thailand	Ministry of Information and Communication Technology, Thailand	6,000
		Total	6,931,628

3. Making a smooth transition from analogue to digital broadcasting

Code	Project Name	Source	Estimated Budget '000 USD
3.01	Support for Transition from Analogue to Digital Broadcasting	ITU	4,700
3.02	Sustainable and efficient Spectrum Management for ICT development in Asia-Pacific	ITU	840
3.03	Enhancing and stimulating innovation through the use of Amateur band	ITU	370
3.04	Asia-Pacific Regional Symposium for Broadcasting Regulators and the Industry & Media Innovation Awards	ITU	4,000
3.05	Convergence in Digital Broadcasting	ITU	500
3.06	Pacific Spectrum Management Harmonization	ITU	2,500
3.07	Spectrum Management	ITU	900
3.08	Automated spectrum management system	Bhutan InfoComm & Media Authority (BICMA)	100
3.09	Integrated National Spectrum Management and Monitoring System	Information and Communications Technology Office - Philippines	800
		Total	14,710

4. Saving Lives and Preserving Our Planet: Emergency Telecommunications and Climate Change			
Code	Project Name	Source	Estimated Budget '000 USD
4.01	Emergency Telecommunications and Climate Change	ITU	80,000
4.02	Satellite Rural Communications Capacity Solutions for LSE	ITU	20,000
4.03	ICTs and Promoting Road Safety in the Asia Pacific Region	ITU	500
4.04	ICT & Improving Road Safety in Bhutan	Road Safety & Transport Authority (RSTA), Ministry of Information & Communications	250
4.05	Use of Broadband to provide for enhanced monitoring of dangerous multi hazards and enhanced disaster management	TRR	3,000
4.06	ICTs and promoting Road Safety	Ministry of Posts and Telecommunications(MPTC)	40
4.07	Satellite Based Telecommunications System for Disaster Management and Climate Change Applications for the South Pacific Island Nations.	Japan Telecommunication Engineering and Consulting Service	22,000
		Total	125,790

5. Addressing Unique ICT Needs of Least Developed Countries, Small Island Developing States and Landlocked Developing Countries

Code	Project Name	Source	Estimated Budget '000 USD
5.01	Low-cost computing devices and e-educational content for Schools	ITU	3,500,000
5.02	Catalyzing ICT use for digital development	ITU	5,300
5.03	"Connect a School; Connect a Community" in Lao P.D.R.	ITU	300
5.04	ITU International ICT Volunteers (IIVs)	ITU	4,000
5.05	Digital Inclusion for ALL	ITU	500
5.06	Connect School; Connect a Community for sustainable development in Myanmar	ITU	3,000
5.07	Developing a Regional Model for Electronic Cause of Death Integrated Reporting System (eCODIRS)	World Health Organization, Regional Office for South East Asia	34,000
5.08	Using Innovation, Technology and Media as Effective Tools in the Fight against the Illicit Trafficking of Cultural Property	UNESCO Bangkok	1,000
5.09	YouthMobile - Engaging young people to develop the next generation of mobile apps for sustainable development and job creation	UNESCO	2,000
'5.10	"Connect a School; Connect a Community" & e-NABLE Projects in Sri Lanka	Telecommunications Regulatory Commission of Sri Lanka	3,000
5.11	Strengthening ICT and Telecom Sector in Bangladesh through Capacity Development of Stakeholders (STIB)	Association of Mobile Telecom Operators of Bangladesh (AMTOB)	2,336
5.12	Implementation of Bhutan CIRT	Ministry of Information & Communications	250
5.13	Application system to manage/maintain Community Centers	Ministry of Information and Communications (MoIC)	50
5.14	Empowering farmers through connecting to market through ICT (Internet and Mobile Phone)	Bangladesh Institute of ICT in Development (BIID)	365
5.15	Improving the collection of ICT statistics for development, in Asian LDCs and Pacific SIDS.	UNESCAP	1,200
5.16	"Connect School; Connect a Community" in Democratic Republic of NEPAL	Nepal Telecommunications Authority	50
5.17	Samoa Cyber Security	Ministry of Communications and IT - Samoa	50
5.18	Regional Distance Learning Centres for Solomon Islands National University (SINU)	Solomon Telekom	5,000
5.19	Harnessing and Preserving National Heritage and Ancient Cultural through ICTs	Ministry of Posts and Telecommunications(MPTC)Cambodia	500
		Total	3,562,901
		Grand Total	52,849,629

1. Building Networked Communities for Future Generations: Infrastructure Development



1. Building Networked Communities for Future Generations: Infrastructure Development

Broadband technologies are vital in transforming lives and fostering socio-economic development. The Asia Pacific region is making good progress in terms of broadband connectivity. By the end of 2012, fixed (wired)-broadband penetration had reached 6.9 % in Asia & Pacific Region compared to 2.6 % in the Arab States, 16.0 % in the Americas, and 25.8 % in Europe. Active mobile-broadband penetration had reached an estimated 15.8 % in Asia & Pacific, compared to 14.3 % in the Arab States, 39.8 % in the Americas and 50.5 % in Europe.

The global challenge today is to bridge the digital divide, which remains an issue with broadband connectivity, between the urban and rural areas.

Projects summary table

1. Building Networked Communities for Future Generations: Infrastructure Development			
Code	Project Name	Source	Estimated Budget '000 USD
1.01	Broadband Networks in the Asia-Pacific Region	ITU	42,000,000
1.02	Connecting Schools- Countries in the Asia-Pacific Region: Connecting the Unconnected Communities	ITU	20,000
1.03	Harmonized ICT Conformance and Interoperability Programmes in Asia-Pacific Region	ITU	27,000
1.04	ICT Infrastructure, Applications and Services	ITU	30,000
1.05	Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	ITU	100,000
1.06	Non-Ionizing Radiation (NIR) and Health Protection	ITU	1,630
1.07	Connecting Greater Mekong Sub region (GMS)	ITU	10,000
1.08	Promoting Transformational Power of Broadband - "Connecting at the Roots"	MCMC & ITU	80
1.09	To establish National Broadband Services Network (NBN) with the help of Public & Private Partnership (PPP) using Social Obligation Funds (SOF)	Bangladesh Telecommunication Regulatory Commission	1,250
1.10	Universal Access and Service and Broadband Deployment in the Asia-Pacific Region	Information technology, post and telecommunications authority, the Government of Mongolia	60
1.11	Mapping the pan Asia-Pacific information superhighway and closing gaps in infrastructure connectivity.	UNESCAP & ITU	1,000
1.12	Support for IP-based Infrastructure development in Asia Pacific	Asia Pacific Network Information Centre (APNIC)	200
1.13	Develop satellite service frame work	Bhutan InfoComm & Media Authority (BICMA)	100
1.14	Regional Broadband through WiFi hotspots co-located with rural GSM towers throughout the Solomon Islands	Solomon Telekom	1,000

1.15	Study on the Relationship between Broadband and Social-Economic Development in Rural Area	China Academy of Telecommunication Research, Ministry of Industry and Information Technology	280
1.16	Cooperation on the GMS Information Superhighway Project (Phase II)	MIIT of China	17,000
1.17	China-Laos Cooperation on TD-LTE Wireless Broadband Demonstration Project	MIIT of China	5,000
		Total	42,214,600

Project Title: **Broadband Networks in the Asia-Pacific Region**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The goals of the World Summit on the Information Society (“WSIS”), which are aligned with the United Nations Millennium Development Goals (“MDGs”), can be achieved through infrastructure capacity building. We are rapidly reaching the 2015 deadline for meeting the WSIS targets of connecting all villages, towns and cities, as well as the MDGs.

In this context, this Project is supporting broadband network initiatives to foster broadband connectivity and ICT applications development.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to provide low cost digital access to public institutions including schools and hospitals, and for underserved populations including those in rural and remote areas in the Asia-Pacific Region countries by development and implementation of broadband connectivity and ICT applications.

Expected Results

1. Broadband infrastructure is established for identified areas in Asia-Pacific Region countries.
2. Human resource capacity for the sustainability of the deployed broadband communication network is strengthened.
3. ICT applications and services are customized.
4. Broadband connectivity and ICT applications are developed and implemented that will provide low cost digital access to public institutions such as schools and hospitals, and for underserved populations including those in rural and remote areas in the Asia-Pacific Region countries.
5. National ICT broadband network plans are developed for the beneficiary countries.
6. An impact assessment report is developed.

Estimated Start Date

January 2014

Estimated Duration

60 months

Estimated Budget

USD 42,000,000,000

Main Activities

- Based on preparation / assessment missions and stakeholder meetings carried out by the ITU, the ITU shall enter into a bilateral agreements with the government of each beneficiary country, or its designated national counterpart (hereinafter, each a “Cooperation Agreement”).
- Thorough evaluation of the existing situation in each country including existing broadband networks, policies, legislation, regulatory processes and procedures.
- Identification of Project site(s) and project team within each beneficiary country for deployment.
- Needs study of each identified Project site to explore the availability and implement the following for Broadband Wireless:
 - Space (availability of premises/land for construction) / collocation of broadband network with existing telecommunication facilities (if any).
 - Electricity; if not available propose alternative solution.
 - Tower for antennas; if not available install a tower.
 - Access to national internet point of presence (PoPs) and/or to an international gateway for IP traffic connectivity.
 - Establishment of point-to-point microwave links for backhaul at appropriate frequency band.
 - Access to and collocation rights on existing towers.
 - Assignment of sufficient bandwidth for the deployment and operation of the broadband wireless network at appropriate frequency band.
- Procurement of required broadband equipment (optical, satellite, wireless, etc.) and shipment to the Project sites.
- Installation, commissioning and putting into operation of Broadband network.
- Development of ICT applications.
- Provision of low-cost digital access to public institutions such as schools and hospitals, and to underserved populations including those in rural and remote areas in the Asia-Pacific Region countries.
- Training of local experts working with public service provider institutions.
- Development of comprehensive impact assessment report for the deployed broadband networks.

Project Title: Connecting Schools - Countries in the Asia-Pacific Region: Connecting the Unconnected Communities

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The Project aims to assist beneficiary countries in the preparation of a National School Connectivity Plan, for those that have not yet prepared one, promoting the understanding and awareness among policy makers and regulators on the need for coordinated policies, regulations and practices in this field. It will also develop in each country at least three model connected schools in underserved areas that can also serve as community ICT centers, equipped with ICT equipment such as personal computers, printers, scanners, assistive technologies, local area networks, low-cost laptops for the students of selected schools in each country or other ICTs such as tablets and e-readers, ICT training materials, periodic training to ensure optimal use - training will also be provided for teachers and trainers who will train community members.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

This project's main objective is to promote the use of ICT applications and services by children and youth, women, indigenous peoples and persons with disabilities. Its other main objective is to demonstrate to Policy Makers and Government decision makers the value of connecting schools and developing connected schools as community ICT centres to include children and youth who lack access and know-how in the use of ICTs and who risk becoming further marginalized. The Project will assist those countries that have not yet developed their National School Connectivity Plans and will develop school-based community broadband ICT centres. The Project will also strengthen the existing relationship among regional and sub-regional organizations and between those and ITU, due to the need of coordinated actions to harmonize the implementation of project activities among the groups of beneficiary countries.

Expected Results

National School Connectivity Plans for each beneficiary country to promote the understanding and awareness among policy makers and regulators of the need for coordinated policies, regulations and practices in this field in order to achieve the WSIS targets of connecting schools to ICT while considering the specificities of each country and corresponding advancements. Model-connected schools equipped with ICTs such as personal computers, printers, scanners,

assistive technologies, local area networks and low-cost laptops (optional) for the students of selected schools in each country. The connected schools will be prepared to serve as community ICT Centres. Model-connected schools shall use suitable technologies according to the geography and local infrastructure for connection in selected communities. Training of instructors (training the trainers and maintenance training) provided on the use of ICT equipment in schools. Beginning and advanced digital literacy training for women and youth will be provided to the community. An agenda of trainings to be defined with the assistance of the ITU Center of Excellence of the Asia-Pacific Region (ASP CoE) and other partners in two modalities, online and face-to-face, using "train the trainers" methodology to prepare instructors to train children and community members. Community members may have access to other on-line training courses after the successful completion of basic courses.

Estimated Start Date

July 2014

Estimated Duration

36 months

Estimated Budget

USD 20,000,000

Main Activities

1 Multi-stakeholder (kick-off) Meeting

At the start of the project, a multi-stakeholder (kick-off) meeting would be convened with all project beneficiaries to formally launch the project, recall its objectives and solicit views from relevant stakeholders. This meeting would review and confirm/modify priorities (see Paragraph 2 - Project description) and agree upon an implementation plan, introduce necessary adaptations within the limits set by the financial partners and establish a consultative mechanism for countries to gain public input. It will also be an opportunity to ensure and formalize the full commitment and participation of all beneficiary organizations and countries and to provide them return benefits as relevant (e.g. publicity for donors also in kind).

2 Development of National School Connectivity Plans

The first activity will be mainly dedicated to information gathering and assessment of the existing situation in each country with regard to the priorities selected by the beneficiaries at the kick-off meeting (including international best practices). All information will be analyzed and recommendations and guidelines will be drafted on the selected topics by the Project team through consultation with beneficiary countries. This methodology aims to improve efficiency and effectiveness in the identification process of difficulties and needs and will facilitate the decision making process of national authorities in addressing the most relevant issues to enable a feasible and tailor-made Connectivity Plan to each beneficiary country.

3 Implementation of Model-connected Schools

The project team will assist national authorities in the selection of the beneficiary schools, considering the main recommendations contained in the National School Connectivity Plan developed for each beneficiary country. The equipment used may vary by school and could include personal computers, tablets, mobile phones, e-readers, printers, scanners, a facsimile machine and low-cost laptops for the students, including ICTs with built-in accessible features for persons with disabilities. . National partnerships and agreements should ensure connectivity for a period of at least three years. Capacity building is critical for the success of the Project. Training courses will be developed to ensure good management, sustainability and continuity. Besides children and teachers, community members will be trained and community leaders will also be trained through a "train-the-trainers" methodology as to ensure an evolution and increase in the number of skilled users. Training sessions may be audio/video recorded for the benefit of other locations.

4 Complementary Trainings

With the assistance of the ITU Center of Excellence of the Asia-Pacific Region (ASP CoE) an agenda of other training courses will be defined in order to improve knowledge and the use of ICTs by community members that have successfully completed the basic courses. These courses may focus specific interests of community members aiming at broadening professional, agriculture and commercial activities to promote social and economic development of beneficiary communities.

Project Title: **Harmonized ICT Conformance and Interoperability Programmes in Asia-Pacific Region**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Information and Communication Technologies (ICTs) and their related services are widely recognized as key drivers for socio-economic and cultural development, as well as for regional integration.

In a global economy characterized by rapid technological change, a variety of ICT solutions and by the convergence of telecommunication networks and services, ICT users – public entities, businesses and consumers - have understandably certain expectations regarding interoperability, quality and safety, as well as environmental sustainability of products and services.

In this regard, to facilitate a safe usage of products and services anywhere in the world, regardless of who is the manufacturer or the service provider, it is crucial that products and services be developed in accordance with relevant international standards, regulations and other specifications, and that their compliance is tested.

Conformance assessment is assured by performing the special testing procedures in recognized laboratories capable of verifying that concerned ICT equipment is built according to international standards.

Conformity assessment increases the probability of interoperability, e.g. equipment built by different manufacturers is capable of communicating successfully. In addition it helps ensuring that products and services are delivered according to expectations. Defining more interfaces where interoperability can be tested increases competition and reduces the chances of being locked into a single product/proprietary solution.

Availability of high quality performing products will accelerate widespread deployment of the infrastructure, technologies and associated services allowing people to access to the Information Society regardless of their location or chosen device and contributing to attaining the Millennium Development Goals.

Problem statement:

Conformity assessment builds consumers' trust and confidence in tested products and consequently strengthens business environment and, thanks to interoperability, the economy benefits from business stability, scalability and cost reduction of systems, equipment and tariffs.

While economically Conformance and Interoperability (C&I) increase market opportunities encourage trade and technology transfer and contribute to the removal of technical barriers, they socially help spreading ICT services availability and affordability to all people at a good level of quality.

To increase the benefits of C&I, many countries have adopted harmonized C&I regimes both at national and bi- or multi-lateral level. However, some developing countries, including Asia-Pacific countries, have not yet done so because of a number of major challenges, such as the lack of appropriate/adequate regulatory frameworks, human capacity and infrastructure, to be in a position to test or to recognize tested ICT equipment (laboratories and related infrastructure).

Justification:

The “Establishing ICT Conformance and Interoperability Regime in Asia-Pacific Region” project replies to the request for assistance from Asia-Pacific countries and Regional Organizations (ROs) to properly address harmonized C&I Regime challenges; consisting of legal, regulatory , qualified institutions and infrastructure (such as laboratories).

Harmonized C&I Regimes will improve regional integration and will foster the availability of highly qualified institutions (Laboratories, Certification and Accreditation Bodies) that will contribute to bridge the Standardization Gap, reduce the Digital Divide and consequently, as is inherent to ICT technologies development, strengthen business environment for global players.

The project will ultimately contribute to international community’s effort in adopting eco-friendly set of harmonized standards as well as in battling against counterfeit goods, since the beneficiary countries will, through C&I Regime instruments, better control and authenticate products crossing their borders.

The project will be implemented in the framework of ITU’s long-term business plan developed upon request of ITU’s Member States in 2010, which build around the following four Pillars:

- **Pillar 1** - Conformance Assessment;
- **Pillar 2** - Interoperability;
- **Pillar 3** - Capacity Building;
- **Pillar 4** - Establishment of C&I Regimes including building Laboratories.

ITU has a longstanding experience in providing assistance to developing countries in building their capacity so as to be able to perform conformance testing of equipment and systems, relevant to their needs, in accordance with the relevant Recommendations and Standards as well as in providing them assistance in establishing regional conformity and interoperability centers suitable to perform interoperability testing as appropriate.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The “Harmonized ICT Conformance and Interoperability Programmes in Asia-Pacific Region” project aims to deliver assistance and cooperation for the establishment of a harmonized Conformance and Interoperability Programmes including Mutual Recognition Agreements and/or establishment of Laboratories, with a view to serve national and regional priorities, to strengthen regional integration and to maximize economic and social benefits in line with objectives of the World Summit on Information Society, the World Telecommunication Development Conference and the Millennium Development Goals.

Expected Results

The following expected outcomes are envisaged:

- i) Set of harmonized Guidelines on technical, legal and regulatory aspects of C&I Regime;
- ii) Customized C&I Regimes established at regional level;
- iii) Laboratories for identified C&I Domains;
- iv) Guidance on the framework and procedures to establish MRAs provided;
- v) Human capacity building on C&I issues enhanced.

Estimated Start Date

March 2014

Estimated Duration

36 months

Estimated Budget

USD 27,000,000

Main Activities

The main activities foreseen for implementation of the project include the following:

- a. **Multi-Stakeholder (Kick-Off) Meeting:** At the start of the project, a kick-off meeting will be convened with all project beneficiaries. This meeting will formally launch the project, recall its objectives and agree upon an implementation plan. It will also be an opportunity to ensure and formalize the full commitment and participation of the beneficiary countries and ROs and to identify/nominate respective experts who will serve as Focal Points and who will participate in the project's implementation.
- b. **Focal Points Training:** In order to ensure effective participation of the Focal Points, training programme will be delivered on main C&I domains (e.g. Interoperability, Electromagnetic Compatibility, Broadband, Next-generation Networks, mobile networks and Environment) in collaboration with ITU's partners specialized institutions in training activities.
- c. **Regional C&I Assessment Study:** In order to determine C&I areas of commonalities and differences, an assessment of the present situation will be carried out in each beneficiary country. This study will pay particular attention to the following areas related to C&I: legal and regulatory framework, accreditation bodies, certification bodies, laboratories in function, MRAs, etc.

- d. **Development of Harmonized Guidelines:** Based on the analysis of the assessment study, a set of Guidelines will be developed for establishment of harmonized C&I Regime in Asia-Pacific region. These Guidelines will cover in particular the following C&I aspects: legal and regulatory framework; supportive institutions to allow smooth implementation of C&I Regimes (such as Accreditation Bodies, Certification Bodies, Metrology Institutes and Conformance Laboratories in relevant C&I Domains).
- e. **Establishment of Laboratory:** The assessment study will also allow identification of needs for additional regional Lab(s) as well as a potential site/location for its/their establishment. Following a feasibility study, Lab(s) for identified C&I Domains (such as mobile, EMG, NGN, Broadband, etc.) will be established. Capacity building will be provided to ensure neutrality/impartiality and competence of the Lab(s).
- f. **Mutual Recognition Agreements:** The assessment study will also identify areas for the establishment of potential MRAs between countries. Guidance on the framework and procedures to establish MRAs will be provided to beneficiary countries.
- g. **Capacity Building:** Capacity building is an essential component for success and sustainability of the project. To link capacity building to the substance of the project, training will be delivered at different stages of the project, more particularly to ensure labs' competence and neutrality/impartiality as well as for smooth implementation of the transposition/customization of the harmonized guidelines at national level.

Project Title: ICT Infrastructure, Applications and Services

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The World Summit on Information Society (WSIS) has emphasized the critical role of information and communication infrastructure including broadband in accelerating the social and economic progress of countries, and the well-being of all individuals, communities and peoples. It also emphasizes on the importance of capacity building in supporting the dynamic Information and Communications Technology (ICT) sector. Over 145 governments have today adopted or are planning to adopt a national policy, strategy or plan to promote broadband. By the end of 2011, fixed broadband services were commercially available in 206 economies (including broadband access through satellite and leased lines), compared with 166 economies five years earlier.

With over 60% (4.3 billion) of the world's population, the Asia-Pacific region is one of the most challenging and diverse geographies in the world, which has great disparity in access and affordability especially for broadband – both infrastructure and applications. It, therefore, is creating significant broadband divide causing socio-economic disparity, according to the ITU's IDI 2012.

ITU has assisted member countries mainly in the Asia Pacific region in developing broadband policies and plans to develop "Master plan for Wireless Broadband in ASP" for Nepal, Samoa, Vietnam, and Myanmar. ITU also provided technical assistance to six countries (Cambodia, Bhutan, Bangladesh, PNG, Pakistan, and Indonesia) for facilitating establishment of their National Broadband Plans). Further technical assistance to countries including Brunei Darussalam, Lao PDR, Marshall Islands, Philippines and St Lucia is underway for the formation of Broadband Policies and Plans/Policies.

This project seeks to assist the broadband / ICT services / application relating to socio-economic development of countries in general and e-governance, e-health, e-agriculture, e-education that can be developed in accordance with the National Broadband Plans already / being prepared in the respective countries as per the targets stipulated.

Beneficiary Countries

Bangladesh
Bhutan
Brunei Darussalam
Cambodia
Indonesia
Lao P.D.R.
Marshall Islands
Myanmar
Nepal (Republic of)
Pakistan
Papua New Guinea
Philippines
Samoa
Viet Nam

Project Objective(s)

The Project is intended to:

- Develop e-government applications connecting key government ministries using wide area network and developing portal for government to government and government to citizen services.
- Develop online educational content portal for primary, middle and high schools including connecting schools to Ministry of Education.
- Develop online portal for agriculture information and advice for farmers for their access at community as well as individual level.
- Establish a telemedicine unit that will extend access to high quality health care to remote areas, improve medical training capabilities for future specialists and increase capacities for medical data communication between networked practitioners.
- Implementation of secure electronic transactions infrastructure and e-services for the government and business sectors, enhancing trade and facilitating the establishment of business relationships between consumers and merchants, mostly in the Tourism sector.
- Provide an e-health, e-agriculture, e-education elements to the services to the telecentre, in order to expand the marketing and revenue opportunities.

Expected Results

- Enhanced use of ICT and broadband applications and services
- Empowerment of citizens
- Better job opportunities for citizens
- Enhanced transparency and good governance in citizen services
- Increased development of local contents and applications

Estimated Start Date

March 2014

Estimated Duration

36 months

Estimated Budget

USD 30,000,000

Main Activities

- Identification of priority areas where the applications need to be developed;
- Identification of beneficiary countries and assessing their readiness to implement the program within the project time schedule;
- Carry out feasibility study in each selected country for assessment of existing ICT Infrastructure and services available and recommendation for strengthening priority service areas for delivery of citizen services;
- Develop applications and services in each area of priority based on recommendations in each country;
- Carry out train-the-trainer in close collaboration with the national and international partners;
- National and Regional workshops to share the project knowledge and outcomes.

Project Title: Universal Access and Service and Broadband Deployment in the Asia-Pacific Region

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

There is now almost a global consensus on the importance of broadband to a market's economic growth and the social interaction of citizens. The ability to access and provide data rich applications and content has become a pre-requisite for global trade and is fast becoming a necessary component of interaction between members of the public as well as Government. Broadband Internet access is now generally regarded as an essential basic infrastructure for society and the economy. From email to the World Wide Web, from electronic commerce to blogs, from Web 2.0 supply-chain management to social networking, a large and growing number of citizens depend on the Internet and access to mass-market data communications services as part of their social and economic lives.

While broadband Internet access is now widely recognized to be essential basic infrastructure, universal access, and deployment lags significantly in less developed markets. Significant progress in expanding Internet access is being made and yet, the Digital Divide stubbornly persists.

Universal Access and Service (UAS) is an important scheme to accelerate not only the telecommunication and ICT services, but also socio-economic developments particularly in rural areas and/or un-served areas. The traditional UAS concept which regards basic telecommunications service as access to telephony only is no longer enough. Internationally, the principle of UAS has evolved over time and today includes broadband as basic telecom/ICT services under the UAS scheme. Recognizing the importance of access to the Internet and the international practice, national broadband policies and/or plans are now taking into account UAS mechanism especially through the UAS Fund for accelerating national broadband deployment.

In the Asia-Pacific region, while many countries have already established the UAS Funds, some countries are still struggling to formulate a UAS policy and to set up the Fund. While for those with already established policy and the Fund, it has been commonly observed that authorities concerned are facing procrastination of fund disbursement resulting in inefficient use of funds which is heavily criticized by the industry and public as a whole.

However, a number of countries with well-established policy framework are advancing implementations of various projects aimed at national broadband deployment. Experiences and lessons learnt from these countries are valuable resources, but only limited available internationally due to several reasons; among them are:

- Documentations are only available in local languages;
- Lack of effective monitoring and evaluation framework;
- No platform for knowledge and experience sharing particularly at the international level;
- Ad-hoc networking among policy makers and implementers rather than a permanent or regular community networking.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The project aims to assist governments in the Asia-Pacific region, and of ASEAN Member Countries in particular in promoting and implementing broadband policy/plan through various measures and means (including technical assistance from this project) and especially through the Universal Access and Service scheme and the UAS Fund.

The project also aims at establishing a platform for policy makers and all stakeholders involved in UAS and broadband implementation to exchange views and experiences as well as to share knowledge and information among each other.

The project will also strengthen and enhance national capacity in both institutional and human capacities in effective development and implementation of UAS policy and projects.

It is an important aspect of the project to promote sustainability of programs/projects to be implemented within the UAS framework as well as of outputs of this project in particular. In this regard, a monitoring and evaluation framework will be established and implemented for a certain period of time, among other measures included in the project.

Expected Results

- Annual Asia-Pacific UAS and Broadband Forums from 2014-2017
- Asia-Pacific UAS Web Portal which is a repository of all kinds of resources e.g. guidelines/toolkits, reports, training materials, social networking service (SNS), monitoring and evaluation platform
- Guidelines/Toolkits for UAS Policy Development and for setting up the Funds
- Country reports / Case studies
- Setting up (modeled) Community Broadband Centres
- Setting up incubators for promoting SMEs through harnessing ICTs
- Geographical Information System (GIS) for UAS zone determination and UAS project monitoring
- Monitoring and Evaluation (M&E) framework for the project including a web portal
- Software applications for M&E
- Training programmes

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 100,000,000

Main Activities

- 1) Develop/prepare various guidelines and toolkits
- 2) Develop a web (repository) portal and M&E framework
- 3) Provide expert assistance to countries
- 4) Develop and conduct online training courses
- 5) Develop and deploy ICT applications and contents
- 6) Technical assistance (e.g. pilot projects)
- 7) Annual Asia-Pacific Regional Forum
- 8) Mid-term project review

Project Title: Non-Ionizing Radiation (NIR) and Health Protection

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The purpose of this project is to analyze the difficulties in the deployment of wireless networks and their associated infrastructures, social apprehension to electromagnetic radiations; evaluate regulations related to its control in every beneficiary country; and develop possible solutions based on said evaluations and studies, including possible changes or developments in regulations, measurement pilot projects that include the social communication of their results and the development of general tools needed to facilitate the deployment of wireless networks with the acceptance of the population and of its political and civil organizations.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

This project aims foster an enabling environment for the deployment of wireless networks and their associated infrastructures in ASP, mainly regarding the lack of appropriate regulatory frameworks and the social apprehension as to Human Exposure to Electromagnetic Fields (EMF). The project will: i) evaluate relevant regulations related to the EMF assessment in every country of the region; ii) development general tools (guidelines, practices and regulatory framework) needed to facilitate the deployment of wireless networks with the acceptance of the population; and iii) implement pilot tests in selected countries. The project will also take into consideration the results of World Health Organization (WHO) achieved in the studies on human exposure in the use of mobile phones and other related documents on Human Exposure to Electromagnetic field. - Electromagnetic fields and public health: mobile phones, Fact sheet N°193 May 2010, as well as ITU Handbook on Spectrum Monitoring, 2011 edition.

Expected Results

- Situation assessment in selected municipalities of beneficiary countries regarding the deployment of antennas based on on-site surveys and meetings with relevant stakeholders (e.g. Mayors, Mayors Associations, Companies, Business Chambers, Regional and National Governments).
- Establishment of guidelines for the development of national regulatory frameworks for the control of NIR for those countries that have not yet developed one.
- Definition of a sustainable plan of action to build up social acceptance regarding the installation of antenna.

- Follow up with the specialized organizations such as WHO and ICNIRP related to the human exposure to electromagnetic field in the use of cellular phones handset and to discuss with the telecommunication regulators an action plan to divulge to the citizens the safety use of the mobile phones.
- Establishment of the basis for a "Guide of Good Practices" related to the installation of antenna support structures and their municipal regulation, environmental protection, cultural heritage protection, urban planning, radiation monitoring and social communication of radiation effects and its control, based on a dialogue among all stakeholders (mayors, companies, regulators, provinces, etc.).
- Development of a measurement system complying international regulations including Continuous Monitoring Systems and Municipal Radiation Maps in each beneficiary country with the aim to assess its effects in those municipalities where issues have arisen and the deployment of radio communication antennas has been considered hindered or difficult.
- Develop a web-site as part of the measurement system to make results available to the public.
- Implementation of a pilot test in each of the beneficiary countries. The pilot test will be based on: Measurement of compliance with standards (ICNIRP/WHO levels) with spot measurements with portable equipment; and the installation of a radiation monitoring center and three continuous radiation measurement monitors in each country.
- Project results submitted to the ITU-D Question 23/1 for sharing the information with the other countries.

Estimated Start Date

February 2014

Estimated Duration

48 months

Estimated Budget

USD 1,630,000

Main Activities

1 Multi-stakeholder (kick-off) Meeting

At the start of the project, a multi-stakeholder (kick-off) meeting will be convened with all project beneficiaries to formally launch the project, recall its objectives and solicit views from relevant stakeholders. This meeting will review and confirm/modify priorities and agree upon an implementation plan, introduce necessary adaptations within the limits set by the financial partners and establish a consultative mechanism for countries to gain public input. It will also be an opportunity to ensure and formalize the full commitment and participation of all beneficiary organizations and countries and to provide them return benefits as relevant (e.g. publicity for donors also in kind).

2 Assessment of Current Scenario in Each Beneficiary Country

The first activity will be mainly dedicated to information gathering and assessment of the existing situation in each country with regard to the priorities selected by the beneficiaries at the kick-off meeting (including international best practices).

3 Development of Guidelines

Create general guidelines for the development of national regulations for the control of NIR for those countries that have not yet developed one.

4 Development of Action and Work Plans

Development of Action and Work Plans to inform citizens of each beneficiary country and to gain social acceptance for the installation of antennas. Follow up with the specialized organizations such as WHO and ICNIRP related to the human exposure to electromagnetic field in the use of cellular phones handset and to discuss with the telecommunication regulators an action plan to divulge to the citizens the safety use of the mobile phones. Define a sustainable work-plan to build up social acceptance regarding the installation of antennas.

5 Establish the Basis for a Guide of Good Practices

Establish the basis for a guide of good practices related to the installation of antenna support structures and their municipal regulation, environmental protection, cultural heritage protection, urban planning, radiation monitoring and social communication of radiation effects and its control, based on a dialogue among all stockholders (mayors, companies, regulators, provinces, etc.).

6 Development of a Measurement System

Develop a measurement system complying international regulations including Continuous Monitoring Systems and Municipal Radiation Maps in each beneficiary country with the aim to assess its effects in those municipalities where issues have arisen and the deployment of radio communication antennas is hindered or difficult.

7 Realization of Pilot Tests Carry Out a Pilot Test in Each of the Beneficiary Countries

The pilot test will be based on: Measurement of compliance with standards (ICNIRP/WHO levels) with spot measurements with portable equipment to be bought (If there were no equipment in the country where the test is performed); and the installation of a radiation monitoring center and three continuous radiation measurement monitors in each country.

Project Title: Connecting Greater Mekong Sub region (GMS)

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The Greater Mekong Sub region (GMS) countries are Cambodia, the People's Republic of China (PRC, specifically Yunnan Province and Guangxi Zhuang Autonomous Region), Lao People's Democratic Republic (Lao PDR), Myanmar, Thailand, and Viet Nam.

Telecommunications is one of the priority sectors that Asian Development Bank (ADB) is focusing on in GMS countries. Its overall vision for this sector is “to establish enhanced telecommunications linkages that facilitate the flow of and access to information. This will lower costs of transacting business, thereby increasing trade and incomes and enhancing the competitiveness of the sub region as a whole”.

In general, this vision is shared by the International Telecommunication Union which is linked to a number of ITU, particularly BDT objectives as follows:

- **Objective 2:** To assist the membership in maximizing the utilization of appropriate new technologies, including broadband, to develop their telecommunication/ICT infrastructures and services, and to design and deploy resilient telecommunication/ICT network infrastructures.
- **Objective 3:** To foster the development of strategies to enhance the deployment, and the safe, secure, and affordable use of ICT applications and services towards mainstreaming telecommunications/ICTs in the broader economy and society.
- **Objective 4:** To assist the membership to create and maintain an enabling policy and regulatory environment, including the establishment and implementation of sustainable national policies, strategies and plans, through sharing best practices and collecting and disseminating statistical information on telecommunication/ICT developments.
- **Objective 5:** To build human and institutional capacity in order to improve skills in the development and use of telecommunication/ICT networks and applications, and to foster digital inclusion for people with special needs, such as persons with disabilities, through awareness raising, training activities, sharing information and know-how and the production and distribution of relevant publications.
- **Objective 6:** To provide concentrated and special assistance to least developed countries (LDCs) and countries in special need, and to assist ITU Member States in responding to climate change and integrating telecommunications/ICTs in disaster management.

Telecommunications/information and communication technologies (ICTs) play an increasingly critical role in our economies and society. They have proven to be a powerful driver of innovation, growth and productivity globally. Broad access to telecommunications/ICTs provides significant opportunities for improving government public services, healthcare, education and the environment.

Telecommunications/ICTs also open new channels for sharing of global knowledge resources and the free flow of ideas and opinions. However, to harness the potential of telecommunications/ICTs, governments and other stakeholders have to provide an enabling policy environment and supporting infrastructure that are robust and responsive to a shifting set of challenges and opportunities.

However, while developed countries are rapidly and effectively leveraging the benefits of ICT, many developing and least developed countries including those in GMS have yet to realize the full potential of ICT, resulting in widening the gaps in socio-economic development including delays in availing potential opportunities and prosperity offered through the use of ICT.

One ICT indicator called the ICT Development Index (IDI) can be examined to monitor and compare developments in ICT across countries in GMS, focusing not only on individual service teledensity but on the status of telecommunication /ICT access, use and skills (individually called as Access sub-index, Use sub-index and Skills sub-index, respectively).

Beneficiary Countries

Cambodia
China
Lao P.D.R.
Myanmar
Thailand
Viet Nam

Project Objective(s)

1. To strengthen the policy and regulatory capacity of GMS countries, in particular (a) Cambodia, which recently established its separate regulatory body, Telecommunication Regulator of Cambodia (TRC), (b) Lao PDR whose regulatory functions are distributed and in some cases overlap among the different Departments of the Ministry of Posts and Telecommunications (MPT), and (c) Myanmar whose regulatory functions reside with the Posts and Telecommunications Department (PTD) of the Ministry of Communications and Information Technology (MCIT) and which according to its draft Telecommunications Law (in the final stages of review and approval by legislative body) that a separate regulator should be established in 2015.
2. To improve the IDIs of GMS countries in all three sub-indices: access, use and skills.
3. In relation to access, improve connectivity and access to unserved and underserved areas of GMS countries, particularly CLMV.
4. In relation to use and skills, aggressively promote digital literacy to all citizens and sectors in GMS, particularly the marginalized ones through ICT skills training, public awareness campaign, encourage innovative and creative local applications development.

Expected Results

1. Favorable telecommunication/ICT policy and regulatory environment in GMS countries attracting sector investments in the countries;
2. Widespread broadband connectivity; connected schools, connected communities;
3. Increased access, usage, creation and sharing of information and knowledge;
4. Promotion of rural livelihood;
5. Creative and innovative ICT applications;
6. Improved ICT skills;
7. Improved IDIs.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 10,000,000

Main Activities

1. Institutional and capacity building of the policy maker and regulators in GMS countries through policy and regulatory and operational advice, intensive trainings and regulatory exchange.
2. Public awareness and acceptance, including its citizens and countries' leadership, acknowledging ICT as critical sector, cutting across all other sectors, that will facilitate socio-economic development of respective countries and meet the goals of MDG and WSIS, among others.
3. Broadband Connectivity and Access Programmes to connect all provinces, towns and unserved areas of the GMS countries. One particular programme proposed is "Connect Schools. Connect Communities" involving (a) the government e.g. Ministry of ICT, regulators, Ministry of Education, Ministry of Planning, local governments, (b) private sector, e.g., telecommunication /ICT industry, (c) NGOs, (d) local schools administration, teachers, parents, students, and (e) other regional and international development partners, among others.
4. Intensive IT and computer trainings for teachers, local entrepreneurs, youth, parents and elderlies and other marginalized sectors.
5. Development and deployment of local ICT contents and applications.

Project Title: Promoting Transformational Power of Broadband -
“Connecting at the Roots”

Source of Proposal: MCMC & ITU

Contact: Cosmas Zavazava -ITU - cosmas.zavazava@itu.int

Brief Description

Broadband has been recognized for its impact on nations’ socio-economic development and achieving Millennium Development Goals. Therefore, access and usage of broadband are increasingly considered as essential prerequisites that need to be universally available to all citizens. Convergence, digitalization and change from network centric to device centric architecture has provided tremendous opportunities for creation of User Generated Content. This has enabled the possibility of participation for anyone, anywhere, anytime in the information society through socio-economic advances and improvements in entrepreneurship especially rural / remote / marginalized communities in improving quality of life.

Based on the successes and lessons learned from countries, especially Malaysia through the Malaysian Communications and Multimedia Commission (MCMC), which have played a critical role to promote broadband and encourage the communities at the roots for their betterment in their lives through the belief that “Everything is possible with broadband”, MCMC has captured five stories which were told in video format about how broadband transforms lives. The stories have inspired people, not only the citizens of Malaysia, but also many in other parts of the world who have seen the videos. It is demonstrated that the approach adopted by the MCMC is so productive and effective that it should be expanded to the international level with an aim to create wide impact and awareness to as many as possible.

Recognizing the common objectives, ITU and MCMC wish to initiate a contest on promoting the transformational power of broadband – “Connecting at the Roots”- which will invite applications for capturing stories about broadband and its impact to individuals and society, based on true stories.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- (i) To raise awareness about the importance of broadband and to promote the use of broadband for transforming lives and society, both at a national and international level;
- (ii) To share experiences regarding the practicality of using of broadband-related applications and content among countries and among individuals;
- (iii) To encourage innovative and creative applications using broadband as a means to achieve goals; and

- (iv) To pave a way forward for future programmes based on this project, perhaps with future possibilities for additional partnerships.

Expected Results

At the end of this project, the following are expected:

- (i) Enhanced awareness of use of broadband for socio-economic development;
- (ii) Improved access to broadband services in rural as well as in remote areas;
- (iii) Enhanced usage of innovations applications and content;
- (iv) Better utilization of USO Fund by creating practical applications for community access;
- (v) Enhanced cooperation and knowledge sharing through exchange of videos/ applications;
- (vi) As a result of the project, the countries whose nationals will be participating in the contest would be capable of further disseminating the knowledge and spread awareness in their countries.

Estimated Start Date

May 2014

Estimated Duration

7 months

Estimated Budget

USD 80,000

Main Activities

- 1 Specifying the details including mode and form of submission of applications
- 2 Drafting the terms and conditions of the Contest
- 3 Announcing commencement of the contest, including dates of applications, and terms and conditions of the Contest through ITU and MCMC websites
- 4 Announcing commencement of the contest through a letter from ITU and MCMC, including dates of applications, and terms and conditions of the Contest to ITU Member States and Sector Members
- 5 Establishing a Screening Committee comprising of two members from ITU, two from MCMC officials, one from public/private sector and one from an ITU Member State from Asia-Pacific
- 6 Screening and shortlisting the submitted applications / videos by ITU and MCMC based on the terms and conditions of the Contest

- 7 Establishing a Selection Committee comprising high level officials from Malaysia and the Regional Director of ITU Asia-Pacific
- 8 Two winners are decided by the Selection Committee for each of the four (4) categories per section 3.2
- 9 Inform the winners and invite them to the ITU Connect Asia-Pacific Summit to be held in Bangkok, Thailand
- 10 Presenting the award to the winners at the ITU Connect Asia-Pacific Summit to be held in Bangkok, Thailand

Project Title: To establish National Broadband Services Network (NBN) with the help of Public & Private Partnership (PPP) using Social Obligation Funds (SOF)

Source of Proposal: Bangladesh Telecommunication Regulatory Commission

Contact: Md Rakibul Hassan - Bangladesh Telecommunication Regulatory Commission - rhassan@btrc.gov.bd

Brief Description

The concept paper states the present state of telecom networks connectivity in Bangladesh and list the steps needed to enhance that. BTRC has introduced Nationwide Telecommunication Transmission Network (NTTN) license on 2009 by providing licenses to two privately held companies- Fiber@Home Limited and Summit Communications Limited. These two operators are engaged to provide domestic transmission network within the country. The main objective to introduce such operator is to create a national infrastructure that will be used by all operators so that duplication of network can be avoided. BTRC also has promoted infrastructure sharing among operators with the aim of reducing waste of national resources. BTRC has introduced “Infrastructure Sharing Guideline” which is enabling the operators to take lease of optical fiber connectivity from existing network laid previously by ANS operators (including BTCL), Power Grid Company of Bangladesh (PGCB), Bangladesh Railway. To expedite the backbone expansion and reach common mass quickly the Government decided to handed over one pair overhead fiber of PGCB(Power Grid Company of Bangladesh) to NTTN operator for providing data connectivity & related services to government, educational & local Government institutes. This paper also identified the challenges .At present Bangladesh Telecommunication Regulatory Commission needs to revise the national broadband master plan, method the assorting demand aggregation and ppp (Public Private Partnership) policy formulation and guidelines. Therefore BTRC would appreciate suggestions from ITU in realizing these objectives.

Beneficiary Country

Bangladesh

Project Objective(s)

To establish national broadband services Network (NBN) with the help of Public & Private Partnership (PPP) using Social Obligation Funds (SOF).

Expected Results

The SOF Fund can be utilized through the programs below:

- Roll-out Telecom Infrastructure at un-served, undeserved and non-revenue generating areas:
- Optic Fiber Project at remote areas
- Power connectivity to remote BTS
- Disaster Recovery
- Weather alert service
- ICTs for disabled persons
- Tele-Health and Tele-Medicine
- Info. Access: Provide connectivity to schools and libraries in the rural areas to obtain affordable telecommunications and Internet access
- VAS application for agriculture
- Special campaign/workshop: on the new technologies, services & facility/utility related to telecommunication. Create mass awareness regarding mobile SIM registration/re-registration and sales process.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 1,250,000

Project Title: **Universal Access and Service and Broadband Deployment in the Asia-Pacific Region**

Source of Proposal: Information technology, post and telecommunications authority, the Government of Mongolia

Contact: Buyan-Ulzii Banmunkh - Information technology, post and telecommunications authority - buyanulzii@itpta.gov.mn

Brief Description

The establishment of the Universal Service Obligation Fund (USO Fund) was legalized in accordance with the amendment of Mongolian Law on Communications in 2001.

In framework of Mongolian Law on Communications and Law on Government Special Funds, and in accordance with the Government decree no. 288 which was approved in 2006, the Communications Regulatory Commission has been developing and implementing a plan for programs and projects financed by the USO Fund until 2008, which was being approved by the Prime Minister of Mongolia.

Since 2009, the Information, Communications Technology and Post Authority has started being in charge of the USOF budget compositions and expenditures as per decree no 151 by the Government of Mongolia, in order to provide information, communications and postal services to remote and underserved areas.

On purpose of providing prompt and reliable ICT services to the distant area citizens, the USO Fund dedicates its activity to enable mandatory basic telecommunications services (voice and internet) into the remote and underserved areas. Moreover, some part of the fund has been spent for the expansion of post and radio television broadcasting services. Based on current USO Fund successful experience on providing sustainable and reliable ICT services to remote areas within the above mentioned types, in today's ever-changing market era it is primarily necessary to develop a Consultancy Paper for the USO Fund Long-Term Strategy based on the global trends of Universal service, which will meet the challenges of 21st century and build knowledge based and technology driven society.

Beneficiary Country

Mongolia

Project Objective(s)

- Review the status of the USOF in Mongolia and renew existing strategy and definitions of US/UA
- Strengthen institutional and human resource capacity building of the existing USOF

Expected Result

- Recommendations on reform of Current USOF policy and strategy

Estimated Start Date

March 2014

Estimated Duration

3 months

Estimated Budget

USD 60,000

Main Activities

To analyze USO Fund's overall operations and current situation and introduce a conclusion based on the analysis.

To conduct a comparative survey on international experience on USO Fund and introduce a conclusion based on the surveys.

To define Universal service/access in Mongolia and determine USO Fund Long-Term Strategy in conjunction with current situation and global trends on Universal services.

To set up an effective monitoring and evaluation framework for UAS project implementations.

To create a platform and fora for networking and knowledge sharing among policy makers and all stakeholders.

To strengthen and enhance human and institutional capacity through various means such as training, meeting, joint project implementation, etc.

Project Title: Mapping the pan Asia-Pacific information superhighway and closing gaps in infrastructure connectivity.

Source of Proposal: UNESCAP & ITU

Contact: Tiziana Bonapace - UNESCAP - bonapace.unescap@un.org

Brief Description

This project is proposed as a second phase of the ESCAP-ITU Pan Asia-Pacific information superhighway network.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to provide better information on how gaps and limitations in the internet transmission network may contribute to the lingering digital divide in Asia Pacific. The project will also facilitate regional discussions on how to close these gaps.

Expected Results

The project will result in:

- Identification of issues limiting the use of terrestrial cross-border connectivity in Asia-Pacific
- Increased transparency and understanding of the underlying dynamics of the market for data transmission through terrestrial broadband infrastructure.
- Corrective actions are proposed, discussed and agreed upon at the sub regional and regional levels to close the identified connectivity gaps.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 1,000,000

Main Activities

The project will be divided into three overlapping phases: i) data collection, ii) mapping of the collected data, and iii) intergovernmental and expert dialogue on the maps and on the way forward.

- **Data collection phase:**

- o Collect data from operators and relevant governments' authorities on cross border points for international transmission.
- o Collect data from operators and relevant governments' authorities on submarine cables landing points, as well as the transmission capacity of these submarine cables.
- o Collect data from operators and relevant government's authorities on actual data traffic between nodes, countries and major routes.
- o Collect data on the aggregation points and final destination of the international data traffic flows of the countries of the region
- o Collect data on the cost for international transmission capacity across countries and on the main routes used for international data transmission.
- o Collect information on ITU's indicators, including for each country the prevailing prices of broadband transmission, equipment type of terrestrial transmission network, network capacity (bit rate), number of optical fibers within the cable, and the operational status of the transmission network.

- **Mapping phase:**

This phase of the project will begin with evaluating how the new data can be represented cartographically. The project will hire a cartographer to represent graphically the new information.

- **International dialogue on closing the Pan Asia-Pacific information superhighway gaps:**

This phase of the project will organize an Asia-Pacific consultative mechanism that will facilitate the dialogue on ways and means to close the connectivity gaps. The project will produce ad-hoc research material (3 studies) and organize a series of meetings at the sub-regional and pan-regional levels with representatives of governments (MoICT, regulators), telecommunication operators, investors and civil society representatives to:

- o validate and update the maps as necessary,
- o identify missing links, loopholes and areas where infrastructure is an important issue in explaining IP transit price differentials,
- o identify the main issues that keep prices high for international transmission and national broadband costs, including regulatory issues,
- o discuss and identify potential solutions in closing the gaps identified. This will include reviewing various options of public/private partnerships, with the final objective of bridging the digital divide,
- o mapping and closing the gaps in the Pan Asia-Pacific information superhighway.

Project Title: **Support for IP-based Infrastructure development in Asia Pacific**

Source of Proposal: Asia Pacific Network Information Centre (APNIC)

Contact: Adam Gosling - APNIC - adam@apnic.net

Brief Description

Effective development of IP-based networks is a key concern of ICT stakeholders in the Asia-Pacific region, to support sustained rapid growth of networks, to ensure that networks are robust and stable, and to facilitate efficient interconnections. Policy makers, regulators and service providers are actively engaged in processes of infrastructure development by adopting appropriate policies, roadmaps, network changes, equipment upgrades and capacity building for IP Network deployment.

This project aims to provide assistance to policy makers, regulators and telecom service providers (Fixed, Mobile, Internet, Applications, Content etc.) in the Asia-Pacific region in at least the following areas of IP network development: the transition of IP networks from IPv4 to IPv6, the adoption of appropriate technical measures to improve network stability and robustness, and the facilitation of local exchange of IP traffic via open and neutral IP exchange points which are developed and operate according to sustainable principles. Details of projects will be discussed and defined by APNIC and ITU.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to assist the APNIC and the ITU Members in effecting smooth migration from IPv4 to IPv6 at national, network and enterprise level while developing relevant skills and providing tangible technical assistance to enable IPv6 in their networks.

Expected Results

Assistance to APNIC and ITU Members in deploying IPv6: At least two Members assisted each year and minimum two networks to enable IPv6

Building human capacity: At least 200 people trained in the areas of IPv6

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 200,000

Main Activities

- Assessment of current situation in Asia-Pacific region in relation to deployment of IPv6;
- Identification of at least two APNIC and ITU Members for concentrated assistance on IPv6 deployment;
- Provide strategic assistance on implementation of the developed frameworks through in-country and online assistances over a 6 month period;
- Organization of regional training or workshop to share best practices and lessons learnt;
- Organization of at least one sub-regional or national trainings (workshops and / or online) courses;
- Develop a project final report and publication.

Project Title: **Develop Satellite Service Framework**

Source of Proposal: Bhutan InfoComm & Media Authority (BICMA)

Contact: Jigme Wangdi / Dorji Wangmo Wangdi - BICMA - jigme@bicma.gov.bt

Brief Description

Bhutan InfoComm & Media Authority (Authority) was established in 2006 after the enactment of the Bhutan Information, Communication & Media Act, and mandated with the overall responsibility of regulating the ICT (including media) sector in Bhutan including the management of radio frequency spectrum. Currently, the radiocomm division in particular is severely constrained by lack of human resources, professional equipment and competency to plan and discharge its mandates fully in professional manner.

In order, therefore, for this very important division to deliver its regulatory mandate of managing radio frequency spectrum efficiently, the Authority needs to develop a strategic plan to enhance its institutional capacity. To develop this strategic plan, it is proposed that development partners assist the Authority in carrying out a detailed organizational development exercise through review of its existing capacity of the Authority to regulate the satellite communications and develop a plan to enhance its institutional capacity including human and other resources.

A part from few assignments for space communications in terms of VSAT communications no significant allocation is done. Since the space technology is continuously developing, the Authority has to be prepared in terms of regulatory tools like band plan and monitoring capabilities.

Beneficiary Country

Bhutan

Project Objective(s)

Develop the satellite service frame work for Bhutan. This will include the regulatory tools like the rules, band plans and the requirements for monitoring capabilities pertaining to the satellite services.

Expected Results

Results:

Recommend long and short term requirements in terms of number of staff, human resource competence, infrastructure and equipment with hardware and software for the radiocomm division

Develop a report consisting of a strategic road map for the regulatory authority for the next 10 years in terms of space communications

Review the national spectrum allocation table for satellite communication

Train the Authority officials with regard to ITU's satellite regulation and recommendation

Outcome: A comprehensive satellite service framework for Bhutan

Estimated Start Date

January 2014

Estimated Duration

6 months

Estimated Budget

USD 100,000

Project Title: Regional Broadband Through WiFi Hotspots Co-located with Rural GSM towers Throughout the Solomon Islands

Source of Proposal: Solomon Telekom

Contact: Keir Preedy - Solomon Telekom - Keir.preedy@telekom.com.sb

Brief Description

Providing cost effective broadband solutions for people in rural regional areas of the Solomon Islands is a huge challenge. Dedicated facilities requiring VSAT backhaul are simply too expensive to be economically viable and currently there is no government sponsored rural access fund to subsidize this service.

Solomon Telekom currently operate 62 rural low capacity solar powered GSM base stations serving regional areas based around villages and transport hubs. Currently a further 26 sites are in build phase and they expect the final number to be 100 sites. Each of these sites uses an efficient VSAT hub. Telekom also operate a WiFi hotspot commercial service currently in the larger towns.

The proposal is for Telekom to add a WiFi hotspot to these rural sites and operate it on incremental satellite bandwidth and to offer a subsidized rural area broadband service aimed at low cost tablet devices and laptops primarily, giving special attention to schools, health clinics, police and other government, non-government, private sector services in the locale of the Base Station.

Beneficiary Country

Solomon Islands

Project Objective(s)

- 1) Allow rural people access to the internet.
- 2) Provide subsidized devices in rural areas to support adoption.
- 3) Improve educational and health services in these areas by focusing on providing coverage to their locations.
- 4) Support the development of local economies through improved communication facilities.

Expected Results

- 1) At least 3000 incremental active internet users in regional areas of the Solomon islands
- 2) Improved school and health clinic services through internet access
- 3) Improved tourism sector

- 4) Improved agriculture sector
- 5) Improved fisheries sector
- 6) Improved natural resources sector
- 7) Access for women in rural areas to services, market information, and other related content from health sector and other

Estimated Start Date

April 2014

Estimated Duration

24 months

Estimated Budget

USD 1,000,000

Main Activities

- 1) Identify optimum wifi solution for each site locale including village, school and clinic locations
- 2) Build 100 wifi hotspots and integrate into the existing Bumblebee system
- 3) Identify and purchase supply of 3000 tablets and laptop devices for initial service offering
- 4) Expand Bumblebee usage credit distribution points to each locale
- 5) Create subsidized airtime offering for regional areas and distribute to new distribution points
- 6) Launch and operate the service

Project Title: Study on the Relationship between Broadband and Social-Economic Development in Rural Area

Source of Proposal: China Academy of Telecommunication Research, Ministry of Industry and Information Technology - China

Contact: Yanting Li - China Academy of Telecommunication Research, Ministry of Industry and Information Technology - liyanting@catr.cn

Brief Description

This project aims to analyze the impacts of broadband development on rural areas from the precepts of both economics and society, and to establish a model, which indicates the interaction between broadband and the rural social-economic development generally reflects the impacts on rural social-economic development of broadband, and provide foundation for government and enterprises making decisions.

This project will organize experiences and cases of application and promotion of urban/developed area broadband deployment, provide proposals for rural broadband development in ASEAN member states, based on large scale survey and data collection.

Beneficiary Countries

Cambodia
China
Indonesia
Lao P.D.R.
Malaysia
Myanmar
Singapore
Thailand
Viet Nam

Project Objective(s)

1. This project aims to analyze the impacts of broadband development on rural areas from the precepts of both economics and society, and to establish a model, which indicates the interaction between broadband and the rural social-economic development generally reflects the impacts on rural social-economic development of broadband, and provide foundation for government and enterprises making decisions.
2. This project will organize experiences and cases of application and promotion of urban/developed area broadband deployment, provide proposals for rural broadband development in China and other Asian countries, based on large scale survey and data collection.

Expected Results

This project will generate reports with the name: Reports on relations between broadband and rural area social-economic development, which includes:

- (1) Models of impacts on rural area social-economic development of broadband
- (2) Patterns of rural area broadband deployment and investment
- (3) Cases of broadband application in rural areas
- (4) Proposals of broadband extension in rural areas of middle-west China and other Asian countries.

Estimated Start Date

March 2014

Estimated Duration

8 months

Estimated Budget

USD 280,000

Main Activities

A leading group and an execution group will be set up under this project; they are both responsible for project implementation. Members of the leading group will be selected from International corporation department of Ministry of Industry and Information Technology and China Academy of Telecommunication Research of MIIT. They're responsible for overall project planning, implementation schedule, internal coordination, and provide decision, support and guidance for the execution group. Members of the execution group will be selected from experts of China Academy of Telecommunication Research of MIIT, who are experienced in the research of broadband related field. The number of execution members will be 6-8. They're responsible for the project implementation and work assigned by the leading group.

- (1) **Survey:** The execution group will organize intensive surveys, mainly to understand application and leading role of broadband applications in developed countries, sort out broadband applications, including living, production and social management, under different rural area environments.
- (2) **Formation of report and theoretical research:** After the periodic survey, experts will be organized for theoretical research, and initially conclude the model which indicates the impacts on rural social-economic development of broadband, sort out cases on rural area broadband deployment and application.

- (3) **Verification of theory:** Launching the second stage survey, focus on rural areas in less developing middle-west China, adaptability analysis on theoretical model, broadband network deployment pattern.
- (4) **Review and promotion:** Consultation with ADB, organize expert review, promote the results and proposals of the project to related authorities in China, as well as other Asian countries.

Project Title: Cooperation on the GMS Information Superhighway Project (Phase II)

Source of Proposal: MIIT of China

Contact: Guolei Cai - MIIT - glcai@miit.gov.cn

Brief Description

Compared with developed countries and regions, ICT infrastructure construction and ICT applications in GMS region are lagging behind. In order to strengthen the ICT infrastructure and promote economic and trade development of the region, the six countries of GMS decided in 2005 to build an information superhighway connecting the six countries. In March of 2008, Phase I of the project was completed after neighboring countries had built country-to-country cross-border transmission networks and completed their domestic parts of the transmission networks respectively. Through Phase I of the project, basic networks of the GMS countries were improved, laying a foundation for future ICT development.

GMS region is featured by a large population and frequent exchanges of people. As the economy and trade grow fast in this region, so are the needs for information and communications technology and applications. In response to such needs, the six countries signed in 2011 a MOU on Further Construction of the Information Superhighway and Promotion of Services and Applications in GMS Region and the GMS ICT Development Strategy.

Beneficiary Countries

Cambodia

China

Lao P.D.R.

Myanmar

Thailand

Viet Nam

Project Objective(s)

1. To build and improve the next generation of backbone networks and high-bandwidth access network combining wire line and wireless technologies, and forge ahead the 3G- 4G migration.
2. To promote use of various applications on the Superhighway, actively discuss and promote ICT application projects based on the Information Superhighway so as to enhance the overall ICT capabilities of the region.
3. To continue the ICT demonstration project in rural areas through suitable technologies in different countries so as to expand use of ICT technologies in rural areas and bridge the digital divide between urban and rural areas.

Expected Results

The Phase II of the Project aims at making new leaps in ICT infrastructure construction and applications, uplifting the overall ICT strength in GMS region and contributing to socio-economic development of the GMS countries.

Estimated Start Date

June 2014

Estimated Duration

24 months

Estimated Budget

USD 17,000,000

Project Title: China-Laos Cooperation on TD-LTE Wireless Broadband Demonstration Project

Source of Proposal: MIIT of China

Contact: Guolei Cai - MIIT of China - glcai@miit.gov.cn

Brief Description

As mobile technologies and services rapidly develop, wireless broadband has become an important infrastructure and has been actively deployed in various countries. Supported by their governments, businesses in China and Laos have conducted multi-facet cooperation in wireless broadband technologies and deployment for a long period of time.

Beneficiary Country

Lao P.D.R.

Project Objective(s)

Datang Group of China and the operator Skytel of Laos will cooperate to build a TD-LTE wireless broadband demonstration network in the Capital city of Vientiane in Laos to provide high-speed, high quality and diversified wireless data services.

Expected Results

Based on this demonstration project, Datang and Skytel will deploy TD-LTE high-speed wireless broadband network in Laos and expand it to other GMS countries so as to uplift the wireless data service level in the whole GMS region.

Estimated Start Date

June 2014

Estimated Duration

24 months

Estimated Budget

USD 5,000,000

2. Creating a pro-ICT Growth Environment



2. Creating a pro-ICT Growth Environment

Governments play an important role in creating a conducive regulatory environment to promote the growth, deployment and uptake of Information and Communication Technologies (ICTs). In so doing they foster competition that will in turn attract foreign and domestic investment into the ICT sector resulting in lower access and use prices and better quality of service. There are new challenges arising from issues that include convergence of technologies, and migration from analog to digital broadcasting, to name but a few.

Projects summary table

2. Creating a pro-ICT Growth Environment			
Code	Project Name	Source	Estimated Budget '000 USD
2.01	Asia and the Pacific Center for Information Society Statistics (APCISS)	ITU	521,000
2.02	e-Accessibility for Persons with Disabilities in the Countries of the Asia-Pacific Region	ITU	1,500,000
2.03	Internet reduction cost through IXPs in the Asia Pacific region	ITU	17,400
2.04	Development Programme for National Computer Incident Response Teams (CIRTs)	ITU	2,700,000
2.05	The Child Online Protection (COP)	ITU	2,000,000
2.06	Disseminating Cybersecurity Culture and Combating Cyber Threats in Asia Pacific Region	ITU	480
2.07	Human Capacity Building in the Asia Pacific Region	ITU	61,500
2.08	South Asian Internet Exchange Network (SINX)	ITU	20,000
2.09	Development of Local Text-to-Speech (TTS) and Electronic Publishing for Persons with Disabilities	ITU	10,000
2.10	Harmonizing Short Range Devices (SRDs) for efficient and affordable lifestyle	ITU	200
2.11	E-Health Opportunities: Leveraging ICTs in Asia-Pacific	ITU	10,000
2.12	Fostering ICT Development by building human capacity in Asia-Pacific Region	ITU	950
2.13	Harnessing and Preserving National Heritage and Cultural Legacy through ICTs	ITU	2,000
2.14	M-powering through mobile broadband	ITU	450
2.15	Empowerment through Bridging Languages, Applications and ICT Localization of ICT Applications in Lao PDR	ITU	500
2.16	Establishment of National ICT Indicators and Statistics Portals	ITU	2,000
2.17	Asean Regional Internet Traffic Exchange Network	ITU	10,000
2.18	Formulation of blueprint for implementation of a common online authentication model	Ministry of Information & Communications-Bhutan	25
2.19	ICTs for agriculture : the e-agriculture strategy toolkit	FAO & ITU	5,000

2.20	Development Programme for National Computer Incident Response Teams (CIRTs)	Information Technology, Post and Telecommunications Authority of the Government of Mongolia	30,000
2.21	ICT Infrastructure, Applications and Services - Mongolia	Information Technology, Post and Telecommunications Authority of the Government of Mongolia	30,000
2.22	Enhancing National Capacities on Monitoring and Evaluation of ICT-Integrated Learning Environments (Phase 1)	UNESCO Bangkok	125
2.23	Use of ICTs to preserve and celebrate endangered local languages and cultures	Prime Minister's Office (PMO), Office of the Chief Information Officer (OGCIO); and the Telecommunications and Radiocommunications Regulator (TRR).	750
2.24	Formulation of Telecom Competition Regulation	Department of IT & Telecom , Ministry of Information & Communications	30
2.25	Research study on best practices in broadband dispute resolution	Consumers International	500
2.26	Empowering Citizens through Digital Literacy	UNESCO & ITU	2,500
2.27	Formulation of eGov Policy	Ministry of Information & Communications	30
2.28	MIIT/ITU Joint Seminar on ICT Policy and Regulatory Issues	Ministry of Industry and Information Technology-China	40
2.29	The Development of Information and Communication Technology and Assistive Technology for Equitable Society	Ministry of Information and Communication Technology, ICT Usage Promotion and Development Bureau, Thailand	148
2.30	The Development of Master Model for Smart Community in Thailand	Ministry of Information and Communication Technology, Thailand	6,000
		Total	6,931,628

Project Title: Asia and the Pacific Center for Information Society Statistics (APCISS)

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The project seeks to enable policy makers in the Asia and the Pacific to take informed decisions on national ICT policies and strategies, and to encourage and facilitate private investment in the ICT sector, by enhancing the availability of comparable data and indicators on information society developments in the Asia and the Pacific region. In order to achieve this objective, this project proposes to create an Asia and the Pacific Center for Information Society Statistics (APCISS) which will serve as the main regional hub for ICT data and analysis. The APCISS will be closely linked to the ITU Global Observatory for the Information Society and be responsible for the implementation of its activities in the Asia and the Pacific region. The implementation of the project will be carried out by ITU in cooperation with other relevant stakeholder in the area of ICT data and statistics, including members of the Partnership on Measuring ICT for Development, and will build on existing national and regional initiatives.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- Significantly enhance existing ICT statistical databases in the region, improving the quantity, quality and timeliness of ICT data.
- Build much-needed ICT statistical capacity in Asia and the Pacific countries.
- Support and co-finance data collection and the conducting of ICT surveys in Asia and the Pacific countries.
- Produce regional high-quality analytical reports and timely statistical news on the latest ICT developments.
- Strengthen the regional implementation of goals and targets related to the MDGs, WSIS and the Broadband Commission for Digital Development.

Expected Results

1. The APCISS will be established and fully operational, including:
 - Facilities necessary for the effective operation of the regional hub, including meeting rooms to host regional and international workshops;
 - Complete staffing (secretarial, managerial, technical, analytical);
 - State-of-the art IT equipment required to fulfill APCISS' function as regional hub for information society statistics.

2. A regional ICT statistics database will be established based on international standards, including:
 - Increased availability (quantity) and relevance (based on the needs of users) of statistical data;
 - Improved quality of the available data in terms of international and time comparability, accuracy and coverage;
 - Increased timeliness of data (covering the most recent years);
 - Enhanced compatibility of the regional statistics with those of international data bases, in particular those by the ITU/the Global Observatory
 - Improved data accessibility for a range of user segments.
3. The institutional and technical capacity of countries will be significantly increased to produce and disseminate ICT statistics, including:
 - The establishment of a system for assessing the statistical capacity of countries in the field of ICT statistics and setting up milestones for their progress;
 - A technical assistance programme being put in place for a selection of countries and sub-sectors of ICT statistics;
 - A repository of technical resources for ICT statistics being set up, including survey materials (questionnaires, manuals), metadata management systems (definitions, classifications) and data analysis tools (open software, data analysis routines, data visualization tools).
 - ICT statistics being explicitly considered in National Strategies for the Development of Statistics in Asia and the Pacific countries.
4. All Asia and the Pacific countries will have carried out ICT surveys:
 - Annual statistical surveys on access to and use of ICTs will be implemented, supported through APCISS in terms of technical and financial assistance and based on internationally agreed standards;
 - The modalities for the collection of ICT data include specific, dedicated surveys and ICT-related modules to be embedded in existing social and economic surveys.
5. Regional, national and thematic ICT statistical reports and analysis will be disseminated to satisfy the needs of a variety of users, including:
 - Statistical publications, providing timely updates on the main ICT indicators;
 - Analytical publications, providing the latest trends, forecasts, impact analysis;
 - Methodological publications, presenting metadata associated to ICT indicators and guidelines for methodological improvement in the construction of the indicators, in collaboration with relevant technical working groups.
6. Quantitative information to monitor international and regional development goals and targets will be available and disseminated, including:
 - ICT statistics necessary for monitoring the MDGs, and their methodological aspects (metadata);
 - Statistical indicators for monitoring the WSIS targets;
 - Data and statistics necessary for the monitoring and evaluation of the targets of the Broadband Commission for Digital Development.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 521,000,000

Main Activities

- 1. Establishment of the Asia and the Pacific Center for Information Society Statistics (APCISS)**
 - Identification of APCISS host
 - Set up of localities, offices, meeting rooms
 - Set up of IT infrastructure
 - Establishment of the technical secretariat
 - Preparation of an annual activity plan
 - Establishment of the Advisory Board for APCISS
- 2. Enhancement of ICT statistics availability in the region**
 - Collection, verification and harmonization of national data
 - Implementation of national ICT surveys
 - Production of estimates for missing years
 - Development of metadata
 - Establishment of database and online portal
- 3. Design and implementation of technical assistance programme to build ICT statistical capacity in countries**
 - Design multi-annual technical assistance plan
 - Deliver training courses and workshops on ICT statistics and analysis
 - Create regional working group to enhance statistical capacity
 - Carry out advisory missions and provide on-site training
 - Set up an online repository of technical resources in Arabic language
- 4. Financial support for ICT statistics in countries**
 - Develop multi-annual financing programme to support countries and statistical operations to produce ICT statistics
 - Finance statistical operations, including stand-alone ICT surveys

5. Dissemination of ICT statistics and analytical reports

- Prepare annual dissemination plan
- Prepare annual statistical publications
- Online dissemination of data and metadata
- Prepare regional and thematic analytical reports
- Carry out impact analysis (economic, social, cultural, environmental)
- Prepare annual reports to monitor MDGs, WSIS targets and Broadband Commission targets

Project Title: e-Accessibility for Persons with Disabilities in the Countries of the Asia-Pacific Region

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

This project “e-Accessibility for Persons with Disabilities in the Countries of the Asia-Pacific Region” aims to ensure that accessible information and communications technologies (ICTs) and ICT services are available and affordable for persons with disabilities in the Countries of the Asia-Pacific Region so they may be used to ensure an inclusive education and provide job opportunities for persons with disabilities in line with WSIS Declaration of Principles & Action Plan with the Tunis Commitment, the United Nations Convention on the Rights of Persons with Disabilities Articles 9, 24, 27 and 32 as well as the UNESCO Salamanca Statement and Framework for Action on Special Needs Education. It will draw on best practices identified by ITU resources, including the ITU Connect a School, Connect a Community toolkit, the ITU-G3ict e-Accessibility toolkit, and the ITU-G3ict publications, Making Television Accessible and Making Mobile Phones and Services Accessible.

The main areas of activity include:

- Development of national e-accessibility policies and regulations for every country of the Asia-Pacific Region; development of model voluntary codes of conduct for ICT service providers in the Countries of the Asia-Pacific Region and the provision of related capacity building to government and industry stakeholders to implement these policies, regulations and codes. National policies and regulations to cover accessible television, mobile phones and services, web sites, applications and social networks.
- Development of an open source text-to-speech engine in local languages for screen readers for websites and mobile phones, and accessible electronic publishing.
- Provision of training to government agencies on making their websites accessible for persons with disabilities, electronic publishing development, and training on the role of public procurement in fostering a market for accessible ICTs.
- Provision of training of Persons with Disabilities on the use of accessible ICTs for employment.
- Provision of training to teachers on the use of accessible ICTs for inclusive education.
- Capacity Building for Disabled Persons Organization (DPOs) and National Disability Councils (NDCs).
- Data Collection.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to ensure that accessible information and communications technologies (ICTs) are available and affordable for persons with disabilities in developing countries so that they can be used to ensure inclusive education and job opportunities in line with various international conventions as well as United Nations Convention on the Rights of Persons with Disabilities Articles 9, 24 and 27.

Expected Results

The following results are envisaged:

1. Development of national e-accessibility policies and regulations for every country of the Asia-Pacific Region; development of model voluntary codes of conduct for ICT service providers of the Asia-Pacific Region and Related Capacity Building
 - Policies, regulations and industry codes developed for accessibility of mobile phones and services, computing devices websites, TV, applications, software and social networks: measures developed requiring operators and broadcasters to raise awareness among persons with disabilities and disabled persons organizations about the accessible features of their services to ensure that not only accessible ICTs are available in markets, but they are actively targeted at persons with disabilities and that operators' and broadcasters' marketing strategies include outreach to persons with disabilities.
 - Capacity building provided to ICT regulators, policy makers and operators on implementing policy, regulatory and industry codes to promote accessible ICTs and marketing accessible ICTs.
2. Development of high-quality, open source including text-to-speech engine: in the countries of the Asia-Pacific Region universities, governments, and organizations dealing with persons with disabilities to develop open-source including text-to-speech engines for blind and visually impaired users, and electronic publishing.
3. Web-Accessibility and Public Procurement Capacity Building
 - Capacity building provided to government officials, regional organizations, UN agencies, disabled persons organizations, and national disability councils (NDCs) on accessible web sites for persons with disabilities, and electronic publishing.
 - Guidelines on public procurement of accessible ICTs developed for schools systems and ICT Universal Service Funds to ensure that schools and Universal Service Funds only procure accessible ICTs.
 - Training on public procurement of accessible ICTS provided to school administrators and Universal Service Fund administrators.

4. Training of Persons with disabilities on the use of ICTs for Employment
 - Job training developed and delivered to persons with disabilities using accessible ICTs, with a particular focus on young disabled people and disabled women. For example, young blind people to be trained to use screen readers for back office processing, call centres and other jobs.
 - Training for potential employers on hiring persons with disabilities by using accessible ICTs developed and delivered, including where feasible in partnership with other organizations such as the ILO Global Business and Disability Network.
5. ICTs for Inclusive Education
 - Guidelines for schools on the use of accessible ICTs to achieve inclusive education of children with disabilities developed.
 - Accessible and assistive ICTs provided to schools in beneficiary countries.
 - Training to teachers on using accessible ICTs to educate children with disabilities to ensure the inclusive education of children with disabilities developed and delivered.
6. Capacity Building for DPOs and NDCs: Capacity building provided to disabled persons organizations (DPOs) and national disability councils (NDCs) on web accessibility training and the use of ICTs to promote education and employment.
7. Data Collection: Data collected on the numbers of people receiving ICT job skills training and receiving an education using accessible ICTs

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 1,500,000,000

Main Activities

The following main activities will be carried out:

1. e-Accessibility Policies, Regulations and Industry Codes
 - Policies, regulations and industry codes developed.
 - Marketing and customer service plans for operators developed to ensure that they actively target and provide outreach to persons with disabilities.
 - Meetings organized for regulators, policy makers and operators to review and agree on the regulatory measures and marketing and customer service plans.

- Training curricula developed and delivered to ICT regulators, policy makers and operators on implementing regulatory measures to promote accessible ICTs and marketing accessible ICTs.
 - Organization of events (venues rented, interpreters hired, invitations sent, programmes developed, travel of experts arranged, fellowships provided to participants).
2. Text-to-speech Engine, Screen Reader, and Electronic Publishing Development
 - Text-to-speech engine developed by technical universities in the Countries of the Asia-Pacific Region.
 - Text-to-speech engine provided for free to software developers and to mobile communication industry in the beneficiary countries.
 - Accessible electronic publications
 3. Web-Accessibility and Public Procurement Capacity Building
 - Training materials developed and delivered to government officials, regional organizations, UN agencies, Disabled Persons Organizations, and national disability councils (NDCs) on creating accessible web sites for persons with disabilities.
 - Guidelines on public procurement of accessible ICTs developed for schools systems and universal service funds.
 - Training on public procurement of accessible ICTS developed and delivered to school and universal service fund administrators.
 4. ICTs for Employment of Persons with Disabilities
 - Training using accessible ICTs developed and delivered to persons with disabilities, with a particular focus on young disabled people and disabled women, working with networks of DPOs, Ministries of Technical and Vocational Training, etc.
 - Training for potential employers on hiring persons with disabilities by using accessible ICTs developed and delivered, working with Ministries of Technical and Vocational Training, and other relevant partners as appropriate.
 5. ICTs for Inclusive Education
 - Guidelines for schools on the use of accessible ICTs to achieve inclusive education of children with disabilities developed.
 - General training events for Ministries of Education and Teachers organizations held on the use of accessible ICTs to achieve inclusive education of children with disabilities.
 - Accessible ICTs procured, shipped, installed, put into operation in schools in beneficiary countries.
 - Ownership of equipment transferred to schools.
 - In-depth training developed and delivered to teachers on using accessible ICTs to educate children with disabilities to ensure the inclusive education of children with disabilities.
 6. Capacity Building for DPOs and NDCs: Training developed and delivered to disabled persons organizations (DPOs) and national disability councils (NDCs) on web accessibility and the use of ICTs to promote education and employment.

7. Data Collection
 - Type of indicators and data to collect identified.
 - Data collectors trained to collect data.
 - Data collectors collect data, e.g. on the numbers of people receiving ICT job skills training and receiving an education using accessible ICTs.
8. Monitoring and Evaluation: Development of comprehensive evaluation report for overall project.

Project Title: Internet Reduction Cost Through IXPs in the Asia Pacific Region

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The project aims to:

- Establish 10 new IXPs in the region, especially in countries where none exists. The vision of the project is to have at least 1 IXP in every country.
- Create and strengthen partnerships between ITU and entities interested in working collaboratively in Internet related issues in Asia Pacific Region.
- Achieve consensus in the region among the different actors –ISPs, Technical Community, Regulators, and Policy Makers- on the benefits of founding local and national IXPs.
- Convince other development actors – like Development Banks and sister UN Agencies - of the benefits of IXPs, not only for the access to the Internet and broadband, but their socio-economic impact.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- Establish 10 new IXPs in the region, especially in countries where none exists.
- Create and strengthen partnerships between ITU and entities interested in working collaboratively in Internet related issues in Asia Pacific Region.
- Achieve consensus in the region among the different actors – ISPs, Technical Community, Regulators, and Policy Makers - on the benefits of founding local and national IXPs.
- Convince other development actors – like Development Banks and sister UN Agencies - of the benefits of IXPs, not only for access to Internet and broadband, but their socio-economic impact.

Expected Results

The expected outputs of the project are:

- The vision of the project is to have at least 1 IXP in 10 countries of Asia Pacific Region. It will also promote the establishment of regional IXPs.
- Establishment of partnerships with entities interested in working with ITU in Internet related issues in Asia Pacific Region.
- Promotion of cooperation and regulatory information sharing.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 17,400,000

Main Activities

- 1 The implementation of this project at the international level requires the following activities:**
 - Work in collaboration with different entities with experience in the assistance to establish IXPs, like ISOC.
 - Include this topic in sub-regional and regional events where Administrations and Regulators assist to win their interest to start a national IXP.
 - Gather information on relevant statistics and data from success stories at implementing local and national IXPs.
 - Give visibility to the aforementioned information through reports, conferences and events, even including by including the topic in related events.
 - Outreaching to Development Banks and UN sister Agencies to present the information.
 - Report of Activities at the international level.
- 2 The implementation of this project in a country may require the following:**
 - Meetings with the Administration and/or Regulator.
 - Meetings with relevant ISPs and other important national players.
 - A first workshop convening ISPs through the Policy Maker entity and/or the Regulator.
 - A second workshop with supporting parties, specially the founding ISPs, to the IXPs through the Policy maker entity and/or the Regulator.

Project Title: **Development Programme for National Computer Incident Response Teams (CIRTs)**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

A fundamental role of ITU, following the World Summit on the Information Society (WSIS) and the 2006 ITU Plenipotentiary Conference is to build confidence and security in the use of information and communication technologies (ICTs).

In line with WSIS Action Line C5 and Programme 2 of the Hyderabad Declaration, ITU and its cybersecurity executing arm, the International Multilateral Partnership Against Cyber Threats (IMPACT), have been supporting ITU Member States' national and regional efforts to build capacity to protect against cyber threats and cybercrime, as well as assisting in establishing organisational structures, such as Computer Incident Response Teams (CIRTs), to identify, manage and respond to cyber threats, and cooperation mechanisms at the regional and international level.

A national CIRT has been identified as a key organisational structure in the response to cyber threats and cybercrime. Acting as a single point of contact within the country for all cybersecurity incidents, a national CIRT will assist in detecting and identifying malicious activities, provide early warning of threats, develop mitigation and response strategies, establish trusted information sharing mechanisms, support cybersecurity awareness and capacity building initiatives.

ITU and IMPACT has performed over 45 CIRT assessments worldwide and assisted five Member States in the implementation of a national CIRT; Montenegro, Burkina Faso, Uganda, Zambia, and Kenya, with a further five implementations confirmed for Ivory Coast, Barbados, Jamaica, Tanzania, and Burundi.

In this regard, ITU and IMPACT wish to engage in a National CIRT Development Programme for the Asia-Pacific region aimed to assist ITU Member States in creating national CIRTs and strengthening the capacity of existing national CIRTs to cooperate on, respond to, and mitigate cyber threats.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The Project is intended to:

- To assess the capability and readiness of identified Member States to build a sustainable National Computer Incident Response Team.

- To study current policies, procedures and forms developed for the computer incident, intrusion, or emergency response process.
- To review the roles and responsibilities of key positions those have been identified as necessary to respond to computer incidents, intrusions, or emergencies.
- To evaluate the tools designed to prevent and detect computer incidents or intrusions.
- To review existing capacity building programmes for national CIRTs.
- To review the risk assessment process employed to determine the computer incident, intrusion, or emergency response process.
- To assist the identified Member States in strengthening pre-existing national CIRT, or implementing a new organisational entity, with the end-goal of having a sustainable national Computer Incident Response Team.
- To conduct capacity building exercises to ensure adequate knowledge and skills for operation, maintenance, and coordination of the national CIRT.

Expected Results

- Strengthen existing national CIRTs as well as allow Member States without relevant organisational structures to implement national CIRTs.
- Significantly contribute to the regional capacity to identify, mitigate, and respond to cyber threats.
- Highlight the important role of a national CIRT and provide positive role models for developing countries to follow.
- Strengthen the overall ITU effort in improving cybersecurity and contribute to the confidence and security in the use of information and communication technologies.

Estimated Start Date

March 2014

Estimated Duration

48 months

Estimated Budget

USD 2,700,000,000

Main Activities

- 1 The Parties agree on Terms of Reference in which a form of agreement may be required. Method and procedures will also be determined including project scope and objectives, responsibilities, timeline, etc.
- 2 IMPACT performs CIRT Assessment, CIRT Follow-up Assessment, or CIRT Audit as per the status of the Member State.
- 3 The Parties produce and review the Member State Assessment or Audit Reports and in coordination with relevant Member State focal points, draft a development action plan for the national CIRT for each participating Member State.
- 4 Member State focal point receives the User Requirement Specifications (URS) and Project Management Plan (PMP) and arranges with relevant domestic stakeholders for implementation of the development action plan.
- 5 Development Action Plan through a six month mission and a fourteen (14) day on-site implementation.
- 6 The Parties produce and deliver Project Closure Report to Member State focal point.

Project Title: The Child Online Protection (COP)

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The “Child Online Protection (COP) Initiative for the Asia & the Pacific Region” is intended to develop a cybersecurity strategy for children and young people, and deliver significant national and societal benefits in the region. This project focuses on five main areas: i) establishment of a general framework for action which coordinates existing efforts and ii) a series of training and prevention initiatives which are focused on children, schools and communities aimed at reducing the risks involved in accessing the Internet. Under the framework of ITU’s COP Initiative, the strategies fall within five work areas: i) Legal measures, ii) Technical and procedural measures, iii) Organizational structures, iv) Capacity Building, and v) International cooperation.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of this project is to “Emphasize the importance of Child Online Protection (COP) and safety of children and youth, through awareness programmes and establishment of technical measures”:

- Formulating a strategy to enhance national/regional cooperation in online child safety among key public and private actors in the country/region;
- Contributing to the fostering of public policies aimed at improving the protection of children online;
- Promoting the empowerment of young people for full and positive online participation and a safe use of digital tools;
- Fostering a better understanding among caretakers and teachers as well as children and adolescents of the risks involved in Internet-use to minimize harm.

Expected Results

i) Legal Measures: Enhancing public policies in the field of online child safety

Key members of the ICT industry in a country, governmental institutions dealing with the issue of child and adolescents’ online safety as well as representatives of the NGO sector and International Organization based in the country will be invited to join the Inter-institutional Commission. This will ensure an effective cooperation among all sectors involved at national level.

- Inter-Institutional Commission: This Commission will serve as leading expert group and, as such, will contribute to the definition of national policies, additional activities and strategies that could complement the deliverable stated in this project.

Provisions will be proposed by the Inter-Institutional Commission on internet safety related issues to look at actions that can be pursued at the national level, and efforts that can be made in conjunction with international entities, such as other UN organizations.

ii) Technical and Procedural Measures: Fostering the cooperation with the ICT industry leaders

In order to formulate a national and international strategy focusing on child online protection, it is essential that communities, including ICT industry leaders, become more involved and develop innovative industry codes of practice to support the ICT infrastructure in becoming more sustainable, flexible and adaptable for children.

- Code of Conduct/Practice: The Inter-institutional Commission will invite participants from different sectors, including broadcast, Internet and mobile, to identify the commonalities for developing a “Code of Conduct” required to regulate the national/regional market. It will evaluate what existing models are already available in other countries. It will develop common rules to create a widely shared approach to protecting children online, to be promoted across whole industries. (I.e. User complaint systems, User friendly Terms and Conditions, Safety information and reporting mechanisms, etc.).
- Financial coalition against Child Pornography: The Inter-institutional commission will invite the national/regional financial and banking sector to form an alliance in order to copy the model of financial coalitions against child pornography active in several countries such as the ones implemented in the USA, the UK or in Brazil.
- Technical tools available to enhance the protection of children online: There are technical tools that are available to address the risks that young people may face in the Internet. These tools will be a complement to the educational strategies mentioned in the above paragraphs. Some examples are anti-grooming engines, memo sticks, age verification instruments, filter software, spam filter, antivirus software, etc. Some of these tools will be installed in the computer laboratories in primary and high schools depending on technical requirements and funding available.

iii) Organizational Structure: Establishing report mechanisms and channels

- Hotline: The project will collaborate with ITU’s COP Members and other international organizations to establish a national hotline to rapidly and effectively respond to reports of illegal and/or harmful content for children, and also to improve international cooperation in this field.
- It will utilize a well-established and widely promoted mechanism to provide a readily understood means for reporting illegal content found on the Internet.
- Internet and/or Content service providers (ISPs) are also invited to join the “International Hotline”, for example, by providing a “Report Abuse Button” in their services to children.
- Children/Youth International Cyber peers: In collaboration with ITU’s COP Members or any other interested stakeholders in the region, the project will set up an international Youth/Children Peer Group to encourage young people to voluntarily and actively advise and inform their peers on how to protect themselves on the Internet.

- Cybersecurity School Peers: Schools and educators will also be invited to set up their own student patrols in their schools. They could extend their mandate to the community and attend reports of abuse from members of the communities.

iv) Capacity Building: Implementing educational and awareness-raising strategies

Education and training is critical for parents, guardians and/or educators to help children have a safe and positive experience on the Internet. It is crucial for them to understand what children and young people are actually doing online as opposed to what adults think they are doing.

At the same time, whilst all stakeholders should do whatever they can to make the Internet as safe as it can be for children, the first and best form of defense in protecting children would be empowering them through education and awareness of all potential risks as well as possible solutions.

- Online tutorials for parents, teachers and children and young people: The project will provide e-media educations and digital literacy along with the relevant cybersecurity messages. To create a participative online care and safety network, it is essential that communities, especially parents and/or educators, become involved. This platform will be designed to also foster the participation of young people and the construction, together with them, of actions in favor of the community through the promotion of local awareness-building and management networks.
- Enlisting the aid of the mass media and online social media in promoting awareness messages: This will develop a series of TV and radio spots which will promote the new online tutorials aimed at informing parents and children about proper and safe uses of the Internet.
- Children/Youth-Oriented Educational Strategies: The project will include student-oriented educational strategies designed to build awareness and foster discussion. Through national governmental agencies, a series of pedagogical actions aimed at fostering a safer use of the Internet among children and adolescents will be implemented.
- The campaign will promote education and training towards various targets, such as students from high schools and primary schools, children and adolescents out of classrooms, national educational advisors and teachers. Also, it will provide for distribution of posters and other message-bearing items urging students to think and talk about safe use of the Internet.
- For example, a “digital banner on Child Online Protection (COP)” will be used when children turn on their computers or access the Internet.
- Children/Youth Express - Competitions: Through social networks or other popular websites, children will be encouraged to participate in express competitions relating to the creative use of digital child-protection technologies.
- The winning proposals will be published in the form of announcements in virtual locations most frequently visited and sought out by children and young people.
- Child Online Protection (COP) Expo-Fair: By bringing together players and stakeholders working in the sphere of online safety on the celebration of the World Telecommunication and Information Society Day (WTISD, 17 May). This event enables the drawing up of an inventory of initiatives, thereby enhancing the actions undertaken and providing for the promotion of any other actions deemed necessary.

v) International Cooperation: Harness the power of global multistakeholder collaboration

- Asia & the Pacific Region Child Online Portal: The project will establish an “Asia & the Pacific Region Child Online Portal” as a project funded by ITU and the countries in the Asia & the Pacific Region and post it on the website of the Asia & the Pacific Region Observatory for Safety and Cybersecurity. It will help the region harness the power of global multistakeholder collaboration by sharing advice and information.

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 2,000,000,000

Project Title: **Disseminating Cybersecurity Culture and Combating Cyber Threats in Asia Pacific Region**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The overall project objective is planning, developing and implementing capacity building programmes in the field of cybersecurity for government decision-makers of Asia Pacific Region, including ministerial agencies and regulators mainly focused on the need of developing a sustainable and proactive culture of cybersecurity, awareness of legal aspects for future harmonization of cybersecurity laws, development of national strategies and security standards. This project aims at promoting and facilitating, through online/face-to-face training programmes, the implementation and deployment of cybersecurity capabilities towards the consolidation of the ITU Global Cybersecurity Agenda (GCA).

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The overall project objective is planning, developing and implementing capacity building programmes in the field of cybersecurity for government decision-makers of Asia Pacific Region, including ministerial agencies and regulators mainly focused on the need of developing a sustainable and proactive culture of cybersecurity, awareness of legal aspects for future harmonization of cybersecurity laws, development of national strategies and security standards. This project aims at promoting and facilitating, through online/face-to-face training programmes, the implementation and deployment of cybersecurity capabilities towards the consolidation of the GCA.

Expected Results

- Development of a consultancy service on “Cybersecurity Challenges and Perspectives in the Asia Pacific Region”.
- Planning, development and implementation of online and/or face-to-face training activities based on the ITU Legal Resources, namely the “ITU Toolkit for Cybercrime Legislation” and the “Understanding cybercrime: a guide for developing countries”. This activity will also take into account existing international instruments, and will be undertaken within the overall framework of collaboration between ITU and the United Nations Office on Drugs and Crime (UNODC), where the two UN bodies agreed to cooperate globally on providing technical assistance. Therefore some specific activities will be jointly undertaken by ITU and UNODC.

- Planning, development and implementation of online and/or face-to-face training activities based on “ITU National Cybersecurity Strategy Guide”.
- Organization of face-to-face regional/sub-regional assessment workshops on the establishment of sound organizational structures with national responsibilities, namely National Computer Incident Response Team (CIRT), tailored to the ITU IMPACT deployment of the Global Response Centre.

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 480,000

Project Title: Human Capacity Building in the Asia Pacific Region

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The aim of this project is to strengthen the Human and Institutional capacity of the countries in the Asia-Pacific Region, in order to maximize the benefits of ICTs for socio-economic development. The project will build on already existing human capacity building initiatives such as the Centres of Excellence, the Internet Training Centre initiative and others, with a view to forge synergies and fill the skills gap. This will be achieved through the strengthening of a self-sustainable capability to provide relevant, high quality training and capacity building for the region.

The project will leverage on partnerships regionally and complement each other's activities. Training areas will be guided by the priorities reflected in the ITU Asia Pacific Regional Initiatives and other ITU programmes as well as the projects emanating therefrom.

The project also aims to create a pervasive e-learning culture throughout the entire Region.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of this project is to strengthen the Human and Institutional capacity of the countries in the Asia Pacific Region, in order to maximize the benefits of ICTs for socio-economic development. The project will build on already existing Human Capacity Building interventions such as the Centre of Excellence, the Internet Training Centre initiative and others, with a view to forge synergies and avoid duplication of efforts.

Specifically, the project aims at:

- Developing the human and institutional capacity within the ICT sector in the region.
- Raising the awareness and use of ICT tools for socio economic development.
- Supporting ICT sector stakeholders in their efforts to meet the human capital challenges in the digital economy / smart society.
- Establishing a basis for a knowledge economy within the region.
- Develop media rich e-learning content in the relevant areas.
- Equipping existing and new institutions with state of the art learning tools and materials.
- Encouraging a learning culture and use of ICT's for learning and development.

Expected Results

- Number of high level training institutions equipped to meet the demands of the Region;
- Library of content developed in all identified priority training areas;
- Quality assurance mechanism established to guarantee excellence of content and delivery;
- Delivery mechanisms defined and established;
- Number of E-learning course Modules developed and national platforms supported;
- Optimizing the use of information technologies applied to training (e-learning should be a priority);
- Incorporation of ICTs learning resources into the national curricula of the countries in the Region;
- Accreditation and certification mechanisms established;
- Number of high level training programmes delivered.

Estimated Start Date

January 2014

Estimated Duration

60 months

Estimated Budget

USD 61,500,000

Main Activities

The following key activities will be undertaken:

- Establishment of a project governance structure;
- Identification of the training institutions to be supported by the project;
- Identification of the resource requirements to be mobilized under the project;
- Identification of the priority areas for which content needs to be developed;
- Identification and contracting of companies and / or experts to develop content;
- Identification of experts to develop and implement a quality assurance mechanism;
- Conduct training in the respective priority areas in response to the identified needs;
- Purchase and installation of training equipment (hardware and software);

- Purchase of learning materials;
- Hiring of experts and consultants for content development and training delivery;
- Monitoring and evaluation of project implementation;
- Project report and closure.

Project Title: South Asian Internet Exchange Network (SINX)

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Information and communication technologies (ICTs) have undergone a tremendous expansion in the past decade thanks to the mobile phone revolution and the exponential growth of the Internet. Information is now available instantly and globally. There were more than 6.8 billion mobile phones worldwide and over 1 billion people now use the Internet. This digital revolution of the 21st century is based on the Internet, which is the revolution's driving force. Without a high-speed Internet connection or at least a mobile telephone, the citizen is excluded from today's information society. In some countries, the essential role of this tool is well understood and the right to means of communication and to broadband Internet access is spoken of as a fundamental right.

In South Asia sub-region, countries in particular, Afghanistan, Bangladesh, Bhutan, Nepal, and India have witnessed significant development of mobile telephony however affordable to affordable Internet connectivity on the other hand remain a key challenge. Establishment of National and Sub Regional Internet Exchanges could serve to reduce the cost of international internet connectivity, reduce the latency hence improving the speed and quality of service and offer opportunity to host local content and applications.

To achieve the objective of keeping local Internet traffic local, some Asian countries have established national Internet Exchange Points (IXPs) and Internet Service Provider (ISP) peering has emerged as one of the most important and effective ways for ISPs to improve the efficiency of operation and to further reduce Internet access costs. The project will contribute towards the building of strong Internet Connectivity in Kathmandu, Nepal as the first beneficiary countries. The overall aim is to provide affordable Internet access and connectivity through the implementation of national and regional Internet exchange points plus any other critical infrastructure identified by the partners during the project's implementation, including technical, policy and regulatory capacity building.

Beneficiary Countries

Afghanistan
Bangladesh
Bhutan
India
Nepal (Republic of)

Project Objective(s)

- Develop ICT infrastructure for the mutual benefit of countries based on public-private partnership;
- Establish SOUTH ASIAN INTERNET EXCHANGE NETWORK (SINX)
- Reduce the cost, latency for internet/data traffic amongst the participating countries and increasing reliability of bandwidth purchased by individual licensed internet access providers of participating countries;
- Pursue the development of local applications and local web content in regional languages;
- Achieve a reliable use of applications requiring high bandwidth including but not limited to video conferencing, multimedia services, internet broadcast etc.
- Promote the development of local contents and application.

Expected Results

- Efficiently connected South Asian countries
- Reduced cost of Internet connectivity at the international level
- Reduced bottlenecks that lead to inefficiencies and associated costs of internet connectivity in the South Asian sub region
- Optimized use of international bandwidth
- Increased development of local contents and applications

Estimated Start Date

March 2014

Estimated Duration

36 months

Estimated Budget

USD 20,000,000

Main Activities

The establishment of SOUTH ASIAN INTERNET EXCHANGE NETWORK (SINX) will have the following main activities:

- Study on
 - Development of SNIX mechanism including ownership, housing and management of such exchange points and need for regulatory oversight.
 - Analysis and recommendations on SNIX network development ensuring security without affecting required privacy.
 - Analysis and recommendations on fair settlement criteria (or free peering) for SNIX network.
 - Benchmarking for similar initiatives.
 - Analysis and concrete recommendations on enabling framework for healthy and dynamic competition in the market as well as for the reduction of the cost of Internet connectivity at the international level.
 - Measures to encourage use of the Internet, and to promote development of local content in AMCs.
 - Development of regulatory and operational frameworks for the SNIX.
- Feasibility Study on the Establishment of SNIX
- Trial/Pilot Project for Selected AMCs.

Project Title: **Development of Local Text-to-Speech (TTS) and Electronic Publishing for Persons with Disabilities**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

There are over 1 billion people worldwide who live with some form of disability according to the 2010 World Report on Disability published by the World Health Organization and World Bank. The majority of these are in developing countries. These numbers are expected to grow as a result of ageing populations and higher life expectancy due to improved health care delivery. In some developing countries, increases in the numbers of persons with disabilities could also arise due to poverty-related violence, wars, and disease. Persons with disabilities and children with disabilities are often excluded from education and mainstream employment or income generating activities, leading to a vicious cycle of un-educated, illiterate adults with disabilities unable to be financially secure and live independently.

Accessible ICTs can be used by persons with disabilities, educators and employers to create a virtuous cycle of development. Promoting accessible ICTs, inclusive education, the right to work and international cooperation will ensure that the rights of persons with disabilities are fully in line with various international conventions such as the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD).

The UN CRPD has established a universal framework for disability rights with guidelines for policy makers and regulators. Article 9 of the Convention establishes obligations for States Parties to ensure that the physical environment, transportation and information and communication technologies are made accessible to persons with disabilities, both by public and private entities.

ICTs are a critical enabler when considering that the literacy rate for adults with disabilities is as low as 3%, or that 90% of children with disabilities do not attend school in some developing countries.

One of key challenges faced in the development and promotion of accessible ICTs is the lack of tools which are specifically designed and developed to meet local needs from PwDs.

To design and develop a computer interface for people with disabilities such as Blindness, Low Vision or Dyslexia is a most challenging task. Availability of screen reading application software has enabled the Persons with Disabilities to be able to access knowledge, information and communication through computer and the Internet. Very recently, screen reading software tools such as NVDA for Windows, TalkBack for Android OS and VoiceOver for iOS, are getting available without additional cost in addition to sophisticated commercial tools that are mostly not affordable to the PwDs especially those in developing countries. Moreover, many local languages are not yet available in those screen readers. One of the main reasons is the lack of Text-To-Speech (TTS) engine which is an essential element for the screen reader.

Recognizing the challenge and the need, the International Telecommunication Union (ITU) has proposed a project and sought to mobilize human, technical, and financial resources with an aim to develop TTS engine for local languages of countries in the Asia-Pacific region. Furthermore, the project also aims to build human and technical capacity for development of electronic publishing especially in EPUB standard.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

Overall objective of this initiative is to build local capacity in development of Text-To-Speech in local languages and electronic publishing using EPUB standard. Therefore, specific objectives are to:

1. Build national capacity in developments of local Text-to-Speech (TTS) and electronic publishing using EPUB standard;
2. Promote the use of TTS in various applications such as disaster early warning systems, audible online dictionary, multilingual speech-to-speech translation, screen readers, IVR (Interactive Voice Response), information announcement service, self-voicing applications which can be realized commercially in the market;
3. Promote EPUB standard and assist countries in defining local standard and development of electronic publishing using EPUB;
4. Promote inclusive multimedia publications in EPUB standard to address the needs of sign language users, minority language speakers and those who are illiterate;
5. Together with national teams, help develop local TTS and assist in applying and deploying the TTS.

Expected Results

- (1) Local TTS for Microsoft Windows, Android OS and iOS as well as Speech and language resources
- (2) Regional and national training for trainers
- (3) National electronic publishing standard development in line with EPUB, W3C Web Accessibility Guidelines and other internationally recognized accessibility standards
- (4) EPUB contents in various languages
- (5) Handbooks for Developers and Users
- (6) Country case studies

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 10,000,000

Project Title: Harmonizing Short Range Devices (SRDs) for efficient and affordable lifestyle

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Over the past decade the role of SRDs, in the daily life of practically everyone has been rapidly increasing and growing significantly important. This is mainly due to the reliance of numerous applications on low power radio transmitters, to enumerate a few examples of common use are alarms, door openers, medical devices, and local communications equipment like Wi-Fi routers and many more. In addition, maintaining a constant flow of innovation, SRDs have also developed significant use in Machine to Machine (M2M) solutions. Today, SRDs are playing an important role in enabling machines and other traditional non-computing devices and sensors to connect with back-end IT-infrastructure in a wide automation network. Other applications attempt to combine short range and cellular technologies offering innovative solutions that opens up new horizons for short range network structures and represents another revolution for M2M technology.

SRDs typically operate over short range, at low power levels and benefit from a relaxed regulatory regime compared with other radio communications stations and systems. As such SRDs operate on a license exempt non-interference and non-protection basis which reduces the risk of interference from or to, other radio communications services as well as from other SRDs, or both.

This project aims to achieve a more efficient living by encouraging innovative usage of Short Range communications while harmonizing the RF bands (with reference to ITU-R recommendation SM-1896) to achieve mass market. The project will attempt to encourage a cyclic process of addressing the future market needs through devising the right hardware technology platforms with focus on standardization efforts and involving the industry participation.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

While recognizing the fact that the regulatory framework for SRDs, such as the decision on frequency bands for use by SRDs, is a national matter the objective of the project is to:

- Employ the true potential of solid and widely adopted short range technologies like UWB, ZigBee, NFC etc. to provide a platform for innovative new applications to be developed quickly and easily
- Encourage usage of millimeter wave(MMW) for new technologies of SRD devices

- Highlight the responsibility of manufacturers to build short-range devices in a way that not only protects them against harmful interference but also ensure that the environment in which they operate remains interference free to the best extent possible.
- Encourage the uptake of SRD innovation amongst the academia.

Expected Results

1. Reviewed the SRD frameworks of the beneficiary countries and recommended the changes in the band allocations for SRDs in line with ITU-R recommendation SM-1896.
2. Conducted a regional event to share information on the new applications of the low power transmitters in order to promote the harmonization of bands for achieving mass scale manufacturing.

Estimated Start Date

May 2014

Estimated Duration

6 months

Estimated Budget

USD 200,000

Main Activities

- Arrange a regional event with support from participating administrations and regulators in order to share the information concerning the bands allocation and other guidelines for using SDRs. The event would also target industry and academia to understand and develop new products /prototypes in the identified bands to achieve more affordable applications/devices.
- Review the current framework guiding the use of SRDs in the participating countries to identify the bands allowed for SRDs.
- Compare and recommend any changes to harmonize the SRD bands along with encouragement to involve academia in development of new ideas.

Project Title: E-Health Opportunities: Leveraging ICTs in Asia-Pacific

Source of Proposal: ITU

Contact: Cosmas Zavazava -ITU- cosmas.zavazava@itu.int

Brief Description

ITU and World Health Organization (WHO) have recognized the need for synergy of health with ICT and accordingly have taken a number of global initiatives including the following:

- Commission on Information and Accountability for Women's and Children's Health to create a framework to monitor global financial commitments for maternal, new born and child health, and ensure that resources save as many lives as possible.
- Non-Communicable Diseases that can be controlled through the intervention of m-Health solutions.
- National e-Health Strategy Toolkit which offers great opportunity and resource for developing or revitalizing a country's e-Health strategy.
- Interoperable health standards while working with SDOs which offers unique opportunity for developing affordable health solutions which are scalable, efficient and interoperable.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

Use of ICT in health sector promises to transform the way health care services are delivered to citizens and in particular mobile health offers exceptional opportunity for countries to achieve MDGs relating to Health. In order to deliver health care for all in the age of information society, it can only be possible through cooperation and partnership between the technology and healthcare sectors. ITU and World Health Organization (WHO) have recognised the need for synergy of health with ICT and accordingly have taken a number of global initiatives, there is an urgent need to harmonized efforts to develop regional strategy which can result in actionable steps at country level with effective and efficient collaboration between the two UN Agencies to meet the objectives of achieving health related outcomes under MDG as well as WSIS.

Expected Results

Key expected outcomes areas follows:

- Develop National e-Health Strategies at country level
- Deploy m-Health for Non-Communicable Diseases (NCDs)
- Implement Accountability for Women's and Children's Health in selected countries

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 10,000,000

Main Activities

In this context ITU along with WHO, propose to develop strategy for Asia-Pacific countries that would harness the existing global initiatives as well as offer technical assistance to selected countries to achieve the e-health objectives as per the mandates under the MDGs.

Project Title: **Fostering ICT Development by building human capacity in Asia-Pacific Region**

Source of Proposal: ITU & India

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The World Summit on Information Society (WSIS) has emphasized the role of information and communication infrastructure including broadband in accelerating the social and economic progress of countries, and the well-being of all individuals, communities and people. With the growth of broadband and the increasing emphasis of governments on leveraging the telecommunication/ICT infrastructure for socio-economic development, there is a need to build human capacity that would create appropriate enabling environment for broadband proliferation and use. ITU Member countries have recognized the importance of promoting broadband uptake in urban and rural areas as well as the need for creating appropriate skills [WTDC 10, Regional Initiatives]. Over 145 governments have today adopted or are planning to adopt a national policy, strategy or plan to promote broadband.

The Indian government also accords very high priority to broadband. The National Telecom Policy 2012 adopts the vision “Broadband on Demand” and envisages leveraging telecom infrastructure to enable all citizens and businesses, both in rural and urban areas, to participate in the Internet and web economy thereby ensuring equitable and inclusive development across the nation. One of the objectives of the policy is to strengthen the institutional framework to enhance the pace of human capital formation and capacity building by assessing and addressing educational and training needs of the sector.

In addition to the dynamic ICT sector, India also has significant human capital and resources and as Member State of ITU, Government of India wishes to demonstrate leadership and contribute towards ICT development by creating conducive environment for sustainable broadband uptake in urban and rural areas for the countries in Asia-Pacific region.

Recognizing the common objectives, the ITU and Government of India would like to implement this project aimed at developing human capacity, strengthening institutions to harness the potential of telecommunication/ICT for socio-economic development in rural and urban areas.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- (i) To upgrade the capability of the identified institutions and experts in India as well as participating countries thereby bridging the skills gap in the identified areas of telecommunications/ICT;
- (ii) To assist countries in the Asia-Pacific region in developing appropriate enabling environment.

Expected Results

- Identification of the priority areas of human capacity development and the skills necessary;
- Customized training programmes and preparation of modules in various areas of skills pertaining to areas / identified policy & regulation, new technologies , cybersecurity and ICT applications delivered to the countries;
- Training centres/institutes in India and other identified and participating developing countries of the Asia-Pacific would significantly enhance their capability and resources to build skills in the identified areas of telecommunications/ICT
 - (i) Availability of high quality programme and modules that can be adapted by other developing countries with minimal changes;
 - (ii) Possible integration of the developed course modules with accreditation / certification programs of university;
 - (iii) Knowledge and expertise sharing through exchange of experts across countries and institutions;
 - (iv) Direct assistances to least developed countries (LDCs) , land locked developing countries (LLDCs) , small islands developing states (SIDSs) and developing countries in areas of high priority identified in the project

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 950,000

Main Activities

- (i) Identification of priority areas in which training modules will be developed;
- (ii) Identification of five beneficiary countries and assessing their readiness to implement the program within the project time schedule.
- (iii) Assessing and identifying institutions in each of these countries in close collaboration with the Member Administration, where (1) upgrade of facilities, programs/curricula and faculty will be undertaken and (2) modules will be hosted.
- (iv) Customizing and building at least 5 training modules based on the identified priority areas.
- (v) Carry out train-the-trainer/faculty member courses in close collaboration with the national and international partners.
- (vi) Transfer the training module to the identified training institutes and hold one training each. These trainings on five key areas will be carried out on a regional / national basis in collaboration with the ITU Asia-Pacific Centres of Excellence Network program and other Government of India / Other Partner programs.
- (vii) Regional workshops to share the project knowledge and outcomes.

Project Title: **Harnessing and Preserving National Heritage and Cultural Legacy through ICTs**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Several national heritage and cultural legacy are in the verge of extinction. ICT is a tool that can preserve as well as protect these national heritage and cultural legacy. The objective of the proposal is to develop, use and deploy ICT applications, national strategies and programmes to promote sustainability and preservation of national heritage and cultural legacy, keeping them accessible as a living part of national culture.

The proposed project will identify outstanding cultural and natural heritage properties, particularly those that are in danger to be covered by the Project. It will develop and publish ICT Tools on Harnessing and Preserving National Heritage and Cultural Legacy. Likewise the proposed project will undertake related research, development and deployment of ICT applications and services e.g., digitization, ICT risk management and monitoring of national heritage.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

Develop, use and deploy ICT applications, national strategies and programmes to promote sustainability and preservation of national heritage and cultural legacy, keeping them accessible as a living part of national culture.

Expected Results

1. Future generation's enjoyment and utility of national heritage and cultural legacy.
2. Appropriate ICT preservation tools, methods and applications, including digitization.
3. Pilot projects, public awareness materials, programmes and fora.

Estimated Start Date

June 2014

Estimated Duration

18 months

Estimated Budget

USD 2,000,000

Main Activities

1. Identification of outstanding cultural and natural heritage properties, particularly those that are in danger to be covered by the Project,
2. Development and publication of ICT Tools on Harnessing and Preserving National Heritage and Cultural Legacy,
3. Research, development and deployment of ICT applications and services e.g. digitization, ICT risk management and monitoring of national heritage.
4. Pilot Projects

Project Title: m-Powering Through Mobile Broadband

Source of Proposal: ITU

Contact: Cosmas Zavazava -ITU- cosmas.zavazava@itu.int

Brief Description

Broadband has been recognized for its impact on nations' socio-economic development and achievement of the Millennium Development Goals. Therefore, access and usage of broadband are increasingly considered as essential prerequisites that need to be universally available to all citizens. Convergence, digitalization, mobility and change from network-centric to device-centric architecture have provided tremendous opportunities for the creation of applications on mobile devices. With the pervasiveness of mobile broadband infrastructure, this has enabled the possibility of participation by anyone, from anywhere, and at any time in the information society through socio-economic advances and improvements in entrepreneurship – it has especially made an impact for rural / remote / marginalized communities and contributed towards improving their quality of life.

Recognizing the common objectives, ITU and GSMA wish to invite potential donors/funding partners to support the project entitled 'M-powering through mobile broadband' to encourage development of mobile broadband infrastructure as well as innovative mobile applications for use in rural and remote areas and by marginalized communities so as to meet the objective of digital inclusion, and to create awareness on best practices for safe usage and the capability of mobile broadband to improve the quality of life for citizens in the Asia-Pacific region.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- i. To raise awareness regarding regulatory policies that can promote mobile broadband infrastructure and facilitate the long term growth of the sector;
- ii. To promote mobile broadband as well as safe and secure mobile applications to improve the overall connectivity and digital lifestyle for consumers;
- iii. To encourage innovative and creative applications using mobile broadband as a means to achieve the goal of digital inclusion; and
- iv. To share experiences for use of mobile broadband especially applications and contents between countries and amongst individuals and communities.

Expected Results

- i. Enhanced use of creative and innovative applications through mobile broadband including by marginalized communities and people living in rural and remote areas;
- ii. Greater exchange of experience and sharing of international best practices in specific policy areas that can encourage investment in mobile broadband infrastructure, consumer confidence in mobile applications and long term growth of the sector;
- iii. Greater exchange of experience and sharing positive and safe aspects of mobile broadband application resulting in enhanced collaboration and greater uptake of services.

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 450,000

Main Activities

- 1 Develop in principle agreement and scope
- 2 Signing the Project Document
- 3 Launch of the Project
- 4 Formulation of Policy & Regulatory Guidelines on Wireless Broadband to be published
- 5 Development and deployment of applications for pilot countries developed
- 6 Organizing National Workshops
- 7 Organizing Regional Forum

Project Title: Empowerment Through Bridging Languages, Applications and ICT : Localization in Lao PDR

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Education, knowledge, information and communication are generally recognized as the core of human progress, endeavor and well-being. Further, Information and Communication Technologies (ICTs) have an immense impact on virtually all aspects of people's lives. Under favorable conditions, these technologies can be a powerful instrument, increasing productivity, generating economic growth, job creation and employability and improving the quality of life of all.

The rapid progress of ICT opens completely new opportunities to attain higher levels of development. The capacity of these technologies to reduce many traditional obstacles, especially those of time and distance provides important prospects in acquiring the necessary skills and knowledge in order to understand, participate actively in, and benefit fully from, the digital economy and benefit millions of people in all corners of the world.

However, there is huge part of the world's population that is voiceless and does not have equal opportunities offered by ICTs because they cannot or have difficulty to access, create and share information and knowledge due to constraints such as language, lack of capacity and coordination that prevent individuals from harnessing the full potential of ICTs. Responding to this challenge, ITU Members have accorded development of ICT applications customized to local needs and language as a priority area in Asia-Pacific region.

At present, the unavailability of Lao language software platform does not appear to be an inhibitor to the use of informatics in commercial enterprises and government public service. Those likely to be able to afford to purchase a computer or educated to a standard to be able to use one are reported to be able to read and write in English. As economic conditions continue to improve and Government services become more widespread throughout the country, including the rural areas, the lack of Lao language applications may become an inhibiting factor in the future.

The Ministry of Posts and Telecommunication (MPT), Lao PDR has sought assistance on the localization of ICT applications in Lao PDR. It fully realizes that the usage and deployment of ICTs will create benefits in all aspects of its citizens' daily life. Further, MPT recognizes that ICT applications are potentially important in government operations and services, health care and health information, education and training, employment, job creation, business, agriculture, transport, protection of environment and management of natural resources, disaster prevention, and culture, and to promote eradication of poverty and other agreed development goals. The Ministry believes that ICT applications should be user-friendly, accessible to all, affordable, adapted to local needs in its language and culture, and support sustainable development to the benefit of Lao PDR population.

The development of local content suited to domestic needs will encourage social and economic development and will stimulate participation of all stakeholders, including people living in rural, remote and marginal areas.

In this context ITU, Microsoft and other partners are responding to the call of Lao PDR to promote empowerment through bridging languages, applications and ICT.

Beneficiary Country

Lao P.D.R.

Project Objective(s)

1. To enhance the utilization of Lao language in information communication technology supporting the local content creation and data exchange in Lao language by promoting the utilization of Lao national standard and enabling the technology to preserve the Lao culture;
2. To promote the utilization of information technology for non-English speaking people especially in rural areas as well as to increase the ICT literacy in the country by providing the most popular software into the Lao language;
3. To enable the government of Lao PDR, academia and community to build, improve and deploy customized automatic language translation system – bringing better and specialized translation quality to the Lao language;
4. To train staff from MPT and other concerned agencies on the customization, deployment, operation and maintenance of automatic language translation system;
5. To encourage innovative and creative local applications;
6. To translate, utilize and conduct trainings on ITU ICT tools to promote rural livelihood;

Expected Results

1. Lao national standard and language technologies such as: Lao font and keyboard, line-breaking, find and replace, sorting and spell check.
2. Add-in and build-in of Lao language technology in the Microsoft operation system and software.
3. Microsoft operating system and software in Lao language platform especially the Lao language interface pack.
4. An operational Microsoft Translator Hub in place the country.
5. Improved communication, collaboration and the ability to conduct research, business and other activities across language barriers.
6. Increased access, usage, creation and sharing of information and knowledge.

7. Promotion of rural livelihood.
8. Creative and innovative ICT applications.
9. Improved ICT skills.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 500,000

Main Activities

1. Conduct research and development of Lao language technology.
2. Include Lao language technology and Lao standardization in different software.
3. Customize and translate the most popular software into Lao language.
4. Install a customized automatic language translation system.
5. Develop and deploy other local ICT applications.
6. Conduct workshop and trainings in connection with items 1 and 2.

Project Title: Establishment of National ICT Indicators and Statistics Portals

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

It has been noted that in several countries in the region, the following challenges are faced:

1. Difficulty in collecting timely and accurate ICT data and statistics.
2. There seem to be lack of standard definition on a number of ICT indicators that governments need to be available.
3. Difficulty in coordination among data providers, collectors and disseminators.
4. Need for establishing one official source of ICT indicators and statistics.

The establishment of national ICT Indicators and Statistics portal will contain accurate and timely ICT statistics that will facilitate well-informed and analyzed ICT-related policies and decisions.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To establish National ICT Indicators and Statistics Portals and strengthen related skills and capacity.

Expected Results

1. Availability of relevant, accurate and timely ICT statistics facilitating effective measurement on the impact and progress of ICT development on the various sectors of society and to have well-informed and analyzed ICT-related policies and decisions.
2. Improved technical capability and skills on ICT data collection, analysis and generation.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 2,000,000

Main Activities

1. Identification of National Focal Points for interested countries
2. Needs analysis
3. National Consultation Workshop on ICT Indicators Prioritization
4. Design and Establishment of National ICT Indicators and Statistics Portals
5. Capacity Building

Project Title: ASEAN Regional Internet Traffic Exchange Network

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The International Telecommunication Union (ITU), a leading agency in telecommunications/ICTs of the United Nations; and the Association of South East Asian Nations (ASEAN) a geo-political and economic association of 10 regional countries of Southeast Asia; are pursuing their strengthened and extended cooperation in the converged ICT environment.

The two organizations wish to facilitate the regional cooperation and partnerships for initiatives aimed at development of information and communication infrastructure in the South East Asian region. The initiative flows from the 1st ASEAN regulator-operator forum held in October 2012 in Myanmar and with initiative 4 of ASEAN ICT Master plan 2015 regarding the development of ICT infrastructure in Southeast Asian region.

ASEAN ICT Master Plan 2015 (initiative 4.1) foresees to establish an ASEAN Internet Exchange Network in order to:

- Establish a regulator-operator forum to develop a platform to facilitate intra-ASEAN internet traffic;
- Facilitate peering amongst ASEAN internet access providers to improve latency and speeds as well as lower costs.

Beneficiary Countries

Brunei Darussalam

Cambodia

Indonesia

Lao P.D.R.

Malaysia

Myanmar

Philippines

Singapore

Thailand

Viet Nam

Project Objective(s)

The Project is intended to:

- Develop ICT infrastructure for the mutual benefit of ASEAN Member Countries (AMC) based on public-private partnership;
- Establish an Asean Regional Internet Traffic Exchange Network (AIX);
- Reduce the cost, latency for internet/data traffic amongst the participating countries and increasing reliability of bandwidth purchased by individual licensed internet access providers of participating countries;
- Promote the development of local applications and local web content in regional languages;
- Achieve a reliable use of applications requiring high bandwidth including but not limited to video conferencing, multimedia services, internet broadcast, etc.

Expected Results

- Efficiently connected ASEAN by keeping local Internet traffic within local infrastructure.
- Reduced cost of Internet connectivity at regional and international level.
- Reduced bottlenecks that lead to inefficiencies and associated costs of internet connectivity in the ASEAN region.
- Improved quality of Internet services by reducing the delay associated with information delivery.
- Optimized use of international bandwidth.
- Increased development of local contents and applications.
- Strengthened ITU-ASEAN collaboration.

Estimated Start Date

March 2014

Estimated Duration

20 months

Estimated Budget

USD 10,000,000

Main Activities

The establishment of ASEAN Internet Exchange (AIX) network will have the following main activities:

- Study covering:
 - Review of present regulations related with Internet Exchange in the ASEAN countries.
 - Development of AIX assessment mechanism including ownership, housing and management of such exchange points and need for regulatory oversight.
 - Analysis and recommendations on AIX network development ensuring security without affecting required privacy.
 - Analysis and recommendations on fair settlement criteria (or free peering) for AIX network.
 - Benchmarking for similar initiatives.
 - Analysis and concrete recommendations on enabling framework for healthy and dynamic competition in the market as well as for the reduction of the cost of Internet connectivity at the international level.
 - Measures to encourage use of the Internet, and to promote development of local content in AMCs.
 - Development of regulatory and operational frameworks for the AIX.
- Feasibility Study on the Establishment of AIX.
- Trial/Pilot Project for Selected AMCs.

Project Title: **Formulation of blueprint for implementation of a common online authentication model**

Source of Proposal: Ministry of Information & Communications, Bhutan

Contact: Dorji Wangmo Ministry of Information & Communications -
dwangmo@moic.gov.bt

Brief Description

The Royal Government of Bhutan has prioritized ICT as the principal enabler for knowledge based society. Government services, with the use of ICT, greatly improve the provision and outreach of services to the citizens and businesses, making it more convenient for them to do business with the Government. To improve the services, there is need for secure and easy-to-use authentication method for the users to prove their identity and obtain personal information and services from the government agencies over the internet.

Although the advantage of the e-governance is numerous, the risks of these e-services being misused are even greater. For that, a secure and easy-to-use authentication method to provide end-to-end encryption of user credentials is required.

Beneficiary Country

Bhutan

Project Objective(s)

Develop a blueprint for implementation of a common Online Authentication model.

Expected Results

A clear and comprehensive blueprint for online authentication for the RGoB.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 25,000

Main Activities

- Draft a standard blueprint for online authentication mechanism that maybe pragmatic for Bhutan's case.
- Consulting and sharing information about current security challenges, threats and defense mechanisms and best practices for strong online authentication technology.
- To advise on customization options tailored to Bhutan's authentication needs for application security in all e-services

Project Title: ICTs for Agriculture: the e-Agriculture Strategy Toolkit

Source of Proposal: ITU & FAO

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

With the increasing challenge of feeding an every growing population, agriculture has been continuously reinventing itself, more so in the last decade. The farming community had to deal with decrease in the amount of arable land, pest and disease, challenges from drastic weather patterns compounded by the effects of climate change and also challenges from industrialization of agriculture, newer value chain and compounded by the lack of actionable information makes this one of the most challenging occupations in the whole world. The Food and Agriculture Organization of the United Nations (FAO) studies show that there are strong, direct relationships between agricultural productivity, hunger, poverty, and sustainability. Three-quarters of the world's poor live in rural areas and make their living from agriculture.

Especially in knowledge intensive fields such as in agriculture, we need to understand current trends, design and implement appropriate and sustainable information and communication technology (ICT) components together with forging effective partnerships. The advancement of ICT for development has been phenomenal in the last decade. From the increasing use of mobile phones for information dissemination, to addressing challenges related to disease or pest tracking, emerging ICT have also provided new opportunities to address the challenges faced by agriculture. Statistics show that there are almost 6 billion mobile connections for the 7 billion people living on this planet.

New ICT based solutions continue to penetrate countries in all regions of the world, as more and more people are getting connected. More and more countries are reaching critical mass in terms of ICT access and use, which accelerates ICT diffusion and further boosts demand, driven by the spread of mobile Internet. With mobile-cellular penetration reaching 96 per cent, globally, and 89 per cent in developing countries. Indeed, mobile broadband is the ICT service displaying the sharpest growth rates, globally, and contributing to changes in ICT use and uptake, as well as to the type of services that the industry is providing.

ICT devices such as notebooks, mobile phones and tablets are no longer used for just communication but an integral part of our lifestyle. By end 2013, it is expected that there would be around 2 billion mobile broadband subscriptions globally.

Realizing the potential of broadband to assist in socio-economic development, over 145 governments have or are planning to introduce a national broadband plan, strategy, or policy. These policies, aim not only at creating a nationwide infrastructure but also address socio-economic issues such as education, governance, citizenship participation, employment, health, food security amongst others. The Broadband Commission for Digital Development, created in 2010 upon the initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Telecommunication Union (ITU), advocates for harnessing the power of the internet and other ICT in efforts to reach the 2015 internationally agreed development goals.

During WTDC 2010, the ITU Members had identified “Broadband Access and Uptake in Urban and Rural Areas” as one of the five Asia-Pacific Regional Initiative with clear expected results. The ITU also developed some applications based on country needs.

The World Summit on Information Society (WSIS) recognized the importance of e-services as early as 2003/2005 and had assigned relevant UN agencies as facilitators in their respective areas. FAO is the focal point for WSIS Action Line on e-agriculture. ITU is the focal point on the WSIS Action lines on Infrastructure, Cybersecurity and Enabling environment and is a common facilitator for other ICT application areas.

For effective implementation and synergy, ITU has set up close partnership frameworks such as Broadband Commission (ITU & UNESCO); e-health strategy (ITU & WHO); Cybersecurity (ITU & UNODC); others. It has also recently launched M-Powering the ITU has launched an initiative m-Powering Development for a Better Tomorrow, aimed at extending the benefits of mobile telephony to all strata of society, in order to build a truly inclusive information society, with special focus on remote rural and underserved areas. A number of international organizations and commercial entities have enhanced their focus on using ICT applications for smart and sustainable development that empower individuals. The ITU has also developed several toolkits and guidelines on ICT applications, including e-health, m-Government, and e-environment amongst others.

ICT and Agriculture

The use of ICT in agriculture is not new. For decades, it has helped in determining agriculture prices, creating awareness on best practices through mobile, websites and broadcasting networks, providing micro credits, agriculture insurance, enhancing crop productivity, managing food delivery amongst others. It has seen a number of innovative and creative public-private-people based smart partnerships, not only from developed but also developing and least developed countries. A report from FAO entitled ICT uses for inclusive agricultural value chains classifies ICT services as follows:

- * ICT for use in production system management including services broken down into sub-categories of information services that involve short-term and long-term productivity enhancements; those that minimize the negative effects of crisis events, for example, by informing on how to protect crops from freezing weather in the short term; and those that improve field-based risk management, for example, by guiding the implementation of crop rotation to preserve the soil in the long term;
- * ICT for market access including service that provides beneficiaries, especially farmers, with access to information on pricing of agricultural products (inputs and outputs) and on finding and connecting to suppliers, buyers or logistics providers, such as storage facilities and transport companies. Such services include simple pricing services, virtual trading floors (matching services or full commodity exchanges) and holistic trading services. Market access services also cover ICT solutions that help the typically larger upstream and downstream firms, such as processors or exporters, to manage their operations and the quality of their produce better – here called downstream administration;
- * ICT for financial inclusion offered through ICT solutions for value chains are transfers and payments, credit, savings, insurance and financial derivatives. ICT can help improve rural communities’ access primarily by convincing financial institutions to enter potential rural markets through unconventional methods. These methods typically involve a reduced need for high-cost branches, improved productivity of the staff in place, and a cost model

that generally emphasizes variable costs by paying agents on the basis of transaction volumes instead of salaries. Informal financial services, such as savings groups, often meet two critical needs of the rural poor: convenience (e.g., door-step service), and flexibility (e.g., ability to save and withdraw small amounts).

Now, availability of agriculture information online and service delivery online is not an achievement but a pre-requisite. Thus, this requires concerted efforts encompassing, for example:

- Creation of e-agriculture strategies spanning multiple sectors;
- Management and exchange of best practices in an open manner;
- Digital literacy amongst agricultural stakeholders;
- Development of applications tailored to not only PCs and laptops but mobile devices (including smart phones); and
- Development of creditable market place: i.e., meaning an electronic market place for not only goods but also applications and services.

Although "e-agriculture" type activities and other initiatives to bridge the rural digital divide were already being piloted around the world, the e-Agriculture Community (and the term "e-agriculture") came into being after the WSIS in 2003 and 2005. It was clear to the global WSIS participants that when addressing the challenges of the digital divide, especially in a rural livelihoods context, problems go well beyond just technology. It is a multi-faceted problem of ineffective knowledge exchange and management of information content, as well as the lack of human resources, institutional capacity, and sensitivity to gender and the diverse needs of different groups. With WSIS participants identifying and naming "e-agriculture" as a key action line to address the Millennium Development Goals, the FAO was assigned to lead the development and subsequent facilitation activities that would truly engage stakeholders at all levels. Bringing together a group of Founding Partners in 2006, the e-Agriculture Community officially launched in 2007. Today, the e-Agriculture Community of Practice is still growing and supporting its members and the communities with which they work daily.

e-Agriculture is a global community of practice, where people from all over the world exchange information, ideas, and resources related to the use of ICT for sustainable agriculture and rural development. With over 10,000 members from 160 countries and territories, the e-Agriculture Community is made up of individual stakeholders such as information and communication specialists, researchers, farmers, students, policy makers, business people, development practitioners, and others. Eighty percent of these members are located in developing countries. The members have a common interest that brings them together: improving policies and processes around the use of ICT in support of agriculture and rural development, in order to have a positive impact on rural livelihoods.

FAO also has substantial experience working with ICT in development, and on enabling standards in agricultural information management. The use of meaningful metadata for bibliographic content description and the use of shared vocabularies are primary steps in facilitating interoperability. A community of specialists in agricultural information management standards (AIMS) provides recommendations to facilitate this exchange of data and information sharing by providing a set of common metadata properties and encouraging the use of authority data, controlled vocabularies, and syntax encoding standards. Also, AGROVOC, a multilingual thesaurus includes topics related to agriculture, forestry, fisheries, environment and other domains. It is a multilingual resource, available in more than 20 languages, with an average of

40.000 terms. Information system customizations based on two open source content and digital repository management systems, Drupal and DSpace, have been created under the umbrella of AIMS. These customizations - AgriDrupal, AgriOceanDSpace and AgriMetaMaker - facilitate the publication of interoperable and re-usable metadata that describe agricultural research information.

The Coherence in Information for Agricultural Research for Development (CIARD) movement works with partners to ensure that agricultural research information and knowledge publicly accessible to all.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

FAO and ITU aim to develop an integrated strategy that can serve as guiding tools for ICT and Agriculture stakeholders and assist countries in developing/implementing their e-agriculture strategies. Leveraging the synergies between FAO and ITU, this project aims to address the issues such as policy interventions related to mobile agricultural information systems, guidelines for implementing an e-Agriculture policy including the technical policies that might be needed and specifically.

The Project intends to:

- Develop a toolkit on e-agriculture strategies;
- Assist countries in developing e-agriculture strategies;
- Build knowledge resources for ICT, agriculture and related information dissemination;
- Build human capacity in the areas of e-agriculture; and
- Document successful Public Private Peoples' Partnership Model.

Expected Results

- Strategy toolkit for implementing policies aimed at harnessing ICT for agriculture;
- At least 10 countries assisted in improving their strategy framework for ICT in agriculture;
- Increased development of local contents and applications;
- Capacity development assistance to at least 100 experts over a period of 5 years through train-the-trainer initiatives in the area of ICT application development in agriculture that would further develop large number of ICT applications developers at national/local level;
- Promote knowledge sharing on ICT4D among member countries through the e-Agriculture Community platform and assist in their implementation where possible through expert advice.

Estimated Start Date

January 2014

Estimated Duration

60 months

Estimated Budget

USD 5,000,000

Main Activities

- Developing Guidelines / Toolkits
- Assistance on development of national frameworks through advisory
- Development of knowledge resources / applications / training materials
- Delivery of training to build relevant skills

Project Title: **Development Programme for National Computer Incident Response Teams (CIRTs)**

Source of Proposal: Information Technology, Post and Telecommunications Authority of the Government of Mongolia

Contact: Chinzorig Ganbold - Information Technology, Post and Telecommunications Authority of the Government of Mongolia - chinzig@itpta.gov.mn

Brief Description

To assess the capability and readiness of identified Member States to build a sustainable National Computer Incident Response Team and study current policies, procedures and forms developed for the computer incident, intrusion, or emergency response process.

Beneficiary Countries

Afghanistan
Bangladesh
Bhutan
Cambodia
Fiji
Lao P.D.R.
Mongolia
Myanmar
Nepal (Republic of)
Papua New Guinea
Timor-Leste

Project Objective(s)

To assess the capability and readiness of identified Member States to build a sustainable National Computer Incident Response Team and study current policies, procedures and forms developed for the computer incident, intrusion, or emergency response process.

Expected Results

- Strengthen existing national CIRTs as well as allow Member States without relevant organizational structures to implement national CIRTs.
- Significantly contribute to the regional capacity to identify, mitigate, and respond to cyber threats.
- Strengthen the overall ITU effort in improving cybersecurity and contribute to the confidence and security in the use of ICT.

Estimated Start Date

April 2014

Estimated Duration

12 months

Estimated Budget

USD 30,000,000

Main Activities

- Terms of Reference for CIRT Assessment, CIRT Follow-up, CIRT Audit
- Member State focal point receives the User Requirement Specifications
- Development Action Plan

Project Title: ICT Infrastructure, Applications and Services - Mongolia

Source of Proposal: Information Technology, Post and Telecommunications Authority of the Government of Mongolia

Contact: Chinzorig Ganbold - Information Technology, Post and Telecommunications Authority of the Government of Mongolia - chinzig@itpta.gov.mn

Brief Description

Develop e-applications connecting key government ministries using wide area network and developing portal for government to government and government to citizen services.

Beneficiary Country

Mongolia

Project Objective(s)

Developing portal for government to government (G2G) and government to citizen services (G2C).

Expected Results

- Enhanced use of ICT and broadband applications and services
- Empowerment of citizens/ better job opportunities for citizens
- Enhanced transparency and good governance in citizen services
- Increased development of local contents and applications

Estimated Start Date

April 2014

Estimated Duration

12 months

Estimated Budget

USD 30,000,000

Main Activities

- Identification of priority areas and beneficiary countries
- Carry out feasibility study
- Develop applications and services
- National and Regional workshops

Project Title: **Enhancing National Capacities on Monitoring and Evaluation of ICT-Integrated Learning Environments (Phase 1)**

Source of Proposal: UNESCO Bangkok

Contact: Jonghwi Park - UNESCO Bangkok - j.park@unesco.org

Brief Description

Despite the vast investments that governments have made to equip schools with various ICTs, the effectiveness of ICTs in improving the quality of education and ascertaining the impacts on student learning and performance are still largely unknown. This is partly due to the lack of rigorous and comprehensive monitoring and evaluation (M&E) mechanisms that can identify gaps and facilitate appropriate adjustments in curricula, pedagogy, and practice at the school level. This proposed project seeks to strengthen national capacity on monitoring and evaluation of ICT-integrated learning environments by developing school-level indicators that measure the impact of such learning environments on teaching and learning (e.g. Haier's Smart Classroom). The outputs of this project include (a) a synthesis of the existing M&E mechanisms and indicators of ICT in Education school-level implementation, (b) a conceptual framework for developing indicators, and (c) an initial set of indicators. This project is presumed to be the first phase of a larger project from which outputs will help governments monitor and evaluate the impacts of ICT-integrated classrooms, develop evidence-based policies and eventually maximize the potential of ICTs to enhance quality education.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The proposed project aims to build national capacity on M&E of ICT-integrated learning environments at school level by providing indicators that can measure the effectiveness of ICT and impacts on teaching and learning. To do so, the project will:

- 1) Review existing M&E mechanism and ICT-in-education indicators through baseline research;
- 2) Develop a conceptual framework and an initial set of indicators for measuring impacts of ICT-integrated learning environments on teaching and learning, designed for pilot testing;
- 3) Establish a regional network for pilot testing of indicators for the next phase of the project; and
- 4) Share findings with Member States.

Expected Results

Expected outputs include:

- 1) Existing M&E mechanism and indicators in ICT in Education reviewed and synthesized;
- 2) An initial set of indicators to measure impacts of ICT for teaching and learning determined;
- 3) Project findings are shared.

The project will provide policy makers, officials of M&E divisions, school administrators, teachers and teacher educators with relevant mechanisms to measure the effectiveness of ICT and impacts on teaching and learning. Field evidences will then guide governments in determining suitable programmes and setting-up appropriate conditions (including technical configurations in the classroom setting) at school level to maximize the desirable impacts of ICT on teaching and learning.

In the longer term, the project is expected to support profiling essential competencies for teachers to use ICT in a pedagogical way and designing teacher development programme accordingly.

Estimated Start Date

April 2014

Estimated Duration

12 months

Estimated Budget

USD 125,000

Main Activities

To accomplish objectives, the project will have four (4) main activities:

1. Conduct of Baseline Research (Review existing M&E mechanisms and ICT-in-education indicators),
2. Development of a conceptual framework and an initial set of indicators for measuring impacts of ICT-integrated learning environments on teaching and learning, designed for pilot testing,
3. Knowledge Sharing,
4. Progress Monitoring.

Under Activity 1 (Baseline Research), the Steering Committee composed of Haier, UNESCO Bangkok, UNESCO Institute of Statistics (UIS), and selected expert organizations will be brought together to discuss and review the project scope and plan. Baseline Research will be undertaken to examine existing indicators on ICT-supported teaching and learning used in different countries and in different contexts.

To further substantiate the research, at least two fact-finding missions to selected schools, including Haier Smart Classroom, will be conducted to observe classroom practices vis-à-vis available ICT resources and interview school administrators, teachers and students regarding their ICT in Education practices. The balance in the countries' development level will be taken into consideration when selecting schools. Haier will be closely consulted during this process.

Activity 2 will focus on the development of the initial set of indicators that would serve as the main output of the current project. An Expert Consultative Meeting will be organized to consolidate reports on the outputs of the Baseline Research. Based on these, the group will finalize the conceptual framework that will serve as guide in determining the relevant set of indicators. A lead expert will be tasked to synthesize and consolidate these into one coherent indicator package –the project's main deliverable. These indicators will serve as the basis in developing the corresponding M&E mechanism and instruments to assess ICT-integrated Learning Environments during the projected Phase 2.

Activity 3 will focus on Knowledge Sharing activities. UNESCO Bangkok will present the Haier-UNESCO project outputs to education stakeholders in various events and gatherings, including the Asia Pacific Ministerial Forum on ICT in Education (AMFIE), APEID Conference, Regional Seminar for UNESCO Resource Distribution and Training Centres, and other similar events. All publications and materials will be credited to Haier's support and partnership.

Activity 4 will ensure that the project team conducts regular monitoring activities to look into the progress of project implementation. This will allow the project team to enhance project design, along with corresponding activities and workplan, if necessary.

Project Title: Use of ICTs to Preserve and Celebrate Endangered Local Languages and Cultures

Source of Proposal: Prime Minister's Office (PMO), Office of the Chief Information Officer (OGCIO); and the Telecommunications and Radiocommunications Regulator (TRR). Vanuatu

Contact: Fred Samuel - OGCI, Vanuatu - fsamuel@vanuatu.gov.vu

Brief Description

This project aims to preserve and celebrate endangered local languages and cultures by undertaking a series of training efforts, led by world-class experts in linguistics, to document local language and culture, using modern ICT tools (rather than old-style written phonetic dictionaries). A major product will be youth and women trained by the experts in the creation of "multi-media talking dictionaries," which will document the local language and culture, and will be suitable for school projects, posting on YouTube and similar outlets, and sharing with other groups interested in such documentation. The participants will be trained in the documentation process, and in the use of ICT tools such as video-cams, laptops, editing software, and the Internet.

The project will focus on documenting 2-4 languages, and will be described in detail in the project reports, to allow replication in other settings and countries. After the initial effort, "lessons learned" will be incorporated into a series of follow-on training sessions, which will number about twelve, and cover about 40 languages and cultures. The later waves of workshops will tie into WTISD of 2015, 2016 and 2017, with high levels of publicity and awareness-building, and participation by the Prime Minister or President in giving awards, as well as presentations, radio and press interviews by the best participants.

The project will be designed so that a core of trained participants will be able to carry on the effort after 2017, to document other languages and cultures with minimal input from the experts and Government of Vanuatu.

Beneficiary Country

Vanuatu

Project Objective(s)

1. Workshops: This proposal is for funding a series of workshops to be held in Port Vila, Luganville and across the country. In the initial training workshop, participants originating from Efate, Nguna and the Shepherds islands, and possibly other locales will be brought together at the OGCI training room for about seven days. They will represent a diverse group of indigenous languages spoken in Vanuatu. They will be supplied with training materials such as laptops, digital audio recorders, video cameras. They will learn the skills

necessary to document their endangered languages and cultures, create and edit videos in their local languages, and build innovative online tools such as “talking dictionaries” (see the next item). The expert training team and local counterparts will also travel to the remote Shepherds Island and do a four-day training workshop for additional participants there. (The team of experts from the Living Tongues Institute for Endangered Languages has successfully undertaken this skills training before with similar target audiences in remote locations, such as Papua New Guinea, Micronesia, India, and various others.) OGCIO will ensure that sufficient infrastructure is in place to allow for on-going, sustainable activity, after the training is over, and a “train the trainers” approach will be used. Local school teachers, as well as local women, youth and chiefs will be a target, so that the skills and projects can be integrated into the local schools, and so that trans-generational engagement is maximized. Approximately 500 participants will be trained directly over the course of the workshops.

2. **Talking Dictionaries:** A Talking Dictionary is an interactive online tool that digitally preserves words and phrases, and it allows the user to hear high-quality audio recordings of words in their language, as well as record and upload new content. Talking Dictionaries help create visibility for minority languages on the Web. They are a virtual space where speakers can go to listen to their language, no matter where they are in the world. These online dictionaries can help promote connectivity across sectors, landscapes and generations. When browsing the new dictionaries, readers can learn words and terms related to traditional sustenance practices, which will help them, embrace and appreciate traditional ways of sustenance, and have a place to consult the stored knowledge. Talking dictionaries are a great way to cultivate and partner traditional knowledge with innovation. They are powerful educational tools for communities that are trying to revitalize their endangered languages. The online dictionary is programmed to be bilingual (and can be trilingual, if necessary) so that speakers of the local dominant language(s) can also easily use it to learn a minority language. The talking dictionary serves as a resource to help fluent speakers teach their native language to a new generation of speakers. The diversity of words and concepts found in these new, innovative dictionaries will highlight the local diversity and the unique and beautiful ways of thinking found in local communities.
3. **Web pages and other media:** Our aim, in addition to the talking dictionaries, is to also help the participants build informational web pages (and DVDs, digital files on memory sticks, etc.) for the endangered languages and cultures of Vanuatu represented at the workshop(s). Participants can choose what materials, if any, they want to make public online. These materials will help provide a pathway towards bio-cultural conservation, language conservation and the transmission of traditional ecological and ethno-geographic knowledge to the future generations of stewards for these local language and cultural ecosystems in digital format. Participants will be shown techniques for using their new tools to document cultural ceremonies; interview older members of their communities, especially women and chiefs; obtain and document information on genealogies, land rights, legends and stories, clan and family histories, climate change information, local medicines, local recipes and food-ways, arts and crafts techniques, etc. Participants will also be trained in how to edit and transmit this content in all forms of digital media.

Expected Results

Expected results include the following:

- Creation of at least 40 “talking dictionaries,” digitally documenting about one-quarter of the languages of Vanuatu;
- Posting or creation of at least 1000 usable videos documenting cultural practices in at least 40 tribes or clans;
- 500 trainee/participants trained directly in workshops; all needed equipment to be left with trainees;
- 4000 school children and others indirectly trained via “train the trainers” transmission and training of school teachers who use the skills and equipment for school projects, papers, plays, presentations, etc.;
- Major increase in awareness of issue of language and cultural loss among decision-makers and the population of Vanuatu;
- Writing of a paper documenting the successes and lessons learned from the project, with enough detail to allow replication in other similar SIDS settings and less developed countries with similar concerns about language and culture loss;
- Substantial increase in the body of local work available in digital media on issues of national concern, including: gender diversity and improvement of the lot, voice and status of women; information on Non-Communicable Disease reduction (NCDs are the biggest threat to the health of the population); the impacts of climate change; and Disaster Risk Reduction. This increase will be driven by the substantial rise in the number of trained videographers and video-editors. Such a free, “crowd-sourcing” creation of data and content is actually much more likely to occur in the immediate future than a top-down approach costing much, much more;
- Inculcation of the process and methodology into local institutions, such that the Ministry of Education, Cultural Center, and local schools and teachers can sustainably continue the documentation after the project ends, with only limited input from the experts at the Living Tongues Institute for Endangered Languages.

Estimated Start Date

January 2014

Estimated Duration

44 months

Estimated Budget

USD 750,000

Main Activities

The main activities of the first (Phase 1) workshop are described in detail below. Subsequent Phase 2 workshops will follow the same general activity steps, although subsequent trips to Vanuatu will be organized so that multiple workshops are undertaken on each trip, thus conserving on airfare costs.

Step 1: Researchers from the Living Tongues Institute for Endangered Languages (LTI) will investigate all secondary sources related to the target languages and locations.

Step 2: LTI lead researchers will fly from Salem, Oregon, USA (their headquarters) to Efate, on about 10 May 2014, to meet with team members from OGCIO, Peace Corps, and to liaise with the Ethnographic Museum to obtain filming permits. (Museum staff has confirmed that a small non-profit fee of only 25,000 Vatu (about USD 270) will be required, due to the public service nature of this effort, rather than the very high commercial filming fee (about USD 40,000).

Step 3: LTI lead researchers will meet with other stakeholders, the press, and media, appear on popular talk radio shows, give press interviews, and generally create a “buzz” about the topic of language and culture preservation.

Step 4: LTI will set up for a 7-day workshop in the OGCIO Training Center at Vila Mall in Port Vila. This room holds up to 25 trainees, and has reliable power, lighting, AV, AC, and other facilities, and will be provided free of charge to the effort. If interest warrants, a larger facility at the Cultural Center can accommodate up to 40+ trainees.

Step 5: OGCIO staff and Peace Corps staff will bring pre-selected trainees from the Port Vila Tongoa community, and from Nguna Island, to the Training Center. LTI experts will conduct the workshop, focusing on youth training and “training the trainers.” Another major focus will be on developing materials that can be integrated into school curriculum, used as school projects, or demonstrate ICT skills (videography, editing, and Internet research) that are useful in schools. All equipment required for undertaking the project, and for sustaining it after LTI departs, will be left with the participants for their use (gratis).

Step 6: LTI will participate in a major way in National ICT Day in Port Vila (Saturday, May 17, 2014). This large event is organized by OGCIO with TRR support, and is endorsed by and attended by the Prime Minister or acting PM, as well as various members of the Council of Ministers and numerous dignitaries. LTI will participate in the parade, have a booth, and LTI experts and local participants will speak from the major stage. In 2013 this event attracted 1000 people in the parade and 2500 in the crowd, listening to the speeches and visiting the ICT-related 25 booths. This event, only two years old in Vanuatu, has already become one of the largest in the country. The event ties in to the World Telecommunications and Information Society Day, a world-wide event sponsored by the International Telecommunication Union, the UN agency tasked with overseeing ICT development worldwide. The date of May 17 celebrates the signing of the first international telegraph convention in 1865, one of the key dates in the history of communications.

Step 7: On the Day, workshop participants (mainly youth) will demonstrate what they have learned and created, at the LTI booth and on stage. A prize will be awarded by the Prime Minister or Minister of Education to the best and most innovative product.

Step 8: LTI experts will meet with dignitaries, including the Prime Minister and Members of Parliament, to discuss this issue of language and culture loss. They will also meet with the anticipated guest, a senior official of the ITU, quite possibly the head of the important ITU Development sector.

Step 9: The LTI team, accompanied by OGCIO counterpart staff, will travel to remote Tongoa island, and conduct a similar four – day workshop. Again the focus will be youth training, creating a “buzz” of excitement about the project, and development of materials suitable for use in school projects. Training will be undertaken in the Chiefs’ Nakamal (a large structure built with local materials), and food and accommodation will be provided by the local villagers. All of this will be provided at no or nominal cost.

Step 10: The LTI team will provide interim materials to project stakeholders documenting the products of the effort. These are expected to include press releases; resulting press stories; blogs; videos; photos; and trainee products. These will be suitable for posting on appropriate websites.

Step 11: LTI will provide a phase 1 final report summarizing accomplishments, lessons learned, and including final products (“talking dictionaries,” linguistic research, final trainee products, etc.). The report will also suggest needed next steps, revisions in the approach if any, and a firm schedule for the Phase 2 workshops.

List of Resources for Participants:

The training room will be provided by OGCIO and the training equipment will be provided by the Living Tongues Institute: laptops, digital audio recorders, video cameras, tripods and still photography cameras. Three members of Living Tongues Institute for Endangered Languages will run and coordinate the training programs on site, while additional team members will provide off-site technical support.

Activities To Be Covered in the Workshops:

1. How to set up and operate digital audio recorders and digital still cameras
2. Techniques for linguistic documentation in digital media:
 - a. Recording with local experts; creating videos for ethnographic and linguistic elicitation
 - b. How to create photo-elicitation slide shows and how to record them
 - c. How to use spreadsheets/word processors in documentation
 - d. Lexicon, Phrase and Sentence elicitation; how to elicit linguistic oral ‘text’ genres
3. Assessing vitality of a speech community:
 - a. How to plan, design and conduct sociolinguistic surveys on vitality of local languages
 - b. Interviewing elders, chiefs and youth
4. Digital Workflow:
 - a. How to name and retrieve files, folders; how to process audio, video data
 - b. Metadata -- what is it and why it is useful
5. Transcription:
 - a. International Phonetic Alphabet, English, French and/or Bislama based orthographic systems
 - b. How to listen to and transcribe linguistic data

6. Issues in Orthography Development and Use
7. Development of Community Projects:
 - a. Community agreement or consensus to do project; discussion on orthography ideas
 - b. Photo-documentation of nearby landscape, seascape, flora, fauna of area
 - c. Video of everyday tasks for later narration
 - d. Community survey on use of and attitudes towards language
 - e. Assess need or viability of vernacular teaching materials.

Project Title: Formulation of Telecom Competition Regulation

Source of Proposal: Department of IT & Telecom, Ministry of Information & Communications, Bhutan

Contact: Dorji Wangmo - Ministry of Information & Communications -
dwangmo@moic.gov.bt

Brief Description

The Royal Government of Bhutan has prioritized ICT development in the country. The Ministry of Information and Communications (MoIC) has been mandated to lead the promotion of ICT in Bhutan and prepare Bhutan in building a knowledge society. Developing appropriate policy and legal environment to harness full potential of ICT has been high on the government's agenda.

The Ministry is currently in the process of finalizing its Telecommunications and Broadband Policy, wherein a third Telecommunication operator is encouraged for operation in the market by 2014. Till date, duopoly exists in Telecommunication market. With a third player coming in, the regulation could become complex for which it has become highly relevant and necessary to develop an appropriate competition regulation, which also looks into tariff.

The Telecommunications and Broadband Policy was drafted with expert assistance from ITU.

Beneficiary Country

Bhutan

Project Objective(s)

Develop telecom competition regulation

Expected Results

- 1) Draft of competition regulation
Reports on :
 - Analysis of current competition scenario including any laws pertaining to competition;
 - Analysis of investment environment and any regulatory barriers including existing ROWs, related laws and tariff;
 - Recommendations.
- 2) USF (Universal Service Fund) usage mechanism

3) Any presentation materials

Expected outcome:

- Improved investment and competition environment created in Bhutan.

Estimated Start Date

January 2014

Estimated Duration

6 months

Estimated Budget

USD 30,000

Main Activities

- Stakeholder meetings
- Bilateral discussions
- Workshops
- Presentations
- Preparation of recommendations and other reports
- Preparation of draft competition regulation

Project Title: **Research Study on Best Practices in Broadband Dispute Resolution**

Source of Proposal: Consumers International - Malaysia

Contact: Jeremy Malcolm - Consumers International - jeremy@ciroap.org

Brief Description

In research conducted by Consumers International (CI) in 2011, we found that a majority of consumers who complain to their ISPs about speed issues, connection problems or billing disputes are unsatisfied with the handling of their complaint. Most are unaware of any independent avenues to complain, even if such avenues do in fact exist. This pointed us to the need for work to ensure that a dedicated dispute resolution service for Internet service complaints is available to consumers, that it operates transparently, is available at no or nominal cost to consumers, includes consumer representatives on its governing board and its availability is well publicized to consumers.

One of the main problem areas that CI uncovered in our global research on broadband, but which has not been the subject of significant work so far (other than its treatment in our book, *Holding Broadband Providers to Account: A Consumer Advocacy Manual*), was the lack of accessible independent dispute resolution mechanisms for broadband service complaints. In those countries where such services do exist, we found a lack of outreach to inform consumers of their existence. As a good opportunity exists for further research and awareness raising in this area, CI proposes a desk research study on best practices in broadband dispute resolution.

The initial study will be conducted on an Asia-Pacific regional basis, as the greatest concentration of CI members who participate in our Consumers in the Digital Age issue area are from the Asia-Pacific region, as is its coordinator for CI.

CI is a sector member of the ITU, with a coalition of approximately 50 consumer groups predominantly from Asia, Africa and Latin America, in our priority issue area "Consumers in the Digital Age". They are joined by partner groups from broader civil society specialized in human rights or other areas, who also participate in the coalition. All remain actively involved through our listserv and interactive website, <http://A2Knetwork.org>. CI has more than 20 years of experience in successfully managing multi-country projects and programmes.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To secure greater public awareness and utilisation of avenues for redress for dissatisfied consumers of broadband services.

Expected Results

1. An initial launch workshop to be held in Kuala Lumpur in early 2014 to which the researchers, government officials and other interested ITU members and other stakeholders will be invited.
2. The research study itself, which will contain an introduction, six individual country case study chapters (to be determined in discussion with funders, but tentatively Australia, India, Malaysia, Philippines, Singapore, Thailand), and a conclusion and recommendations.
3. A concluding workshop to present the report.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 500,000

Main Activities

- Initial launch workshop to be held in Kuala Lumpur.
- Research study, six individual country, and case study.
- Series of workshops, if needed, in different countries.
- Final report to be submitted.
- A concluding workshop to present the report.

Project Title: Empowering Citizens Through Digital Literacy

Source of Proposal: UNESCO & ITU

Contact: Jonghwi Park - UNESCO Bangkok - j.park@unesco.org

Brief Description

In the digital age, where ICT is pervasive, it is essential to have a digitally literate citizenship. Digital literacy is no longer an issue of strategic advantage very much an integral part of our lives. ICT devices such as notebooks, mobile phones and tablets are no longer used for just communication but an integral part of our lifestyle. By end 2013, it is expected that there would be around 2 billion mobile broadband subscriptions globally.

Realizing the potential, of broadband to assist in socio-economic development, over 145 governments have or are planning to introduce a national broadband plan, strategy, or policy. These policies, aim not only at creating a nationwide infrastructure but also address socio-economic issues such as education, governance, citizenship participation, employment, health, food security amongst others. The Broadband Commission for Digital Development was created in 2010 upon the initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Telecommunication Union (ITU) with a clear goal – to advocate for harnessing the power of the internet and other information and communication technologies (ICTs) in efforts to reach the 2015 internationally agreed development goals, namely UN Millennium Development Goals. In one of the recently released report “Technology Broadband and Education: Advancing the Education Agenda for All”, by the Broadband Commission Working Group on Education, the following recommendations for governments and all stakeholders concerned with education have been made:

1. Increase access to technology and broadband

Policy-makers should continue efforts to implement cross-sectorial policies ensuring affordable and equitable access to technology and broadband connectivity for all citizens, particularly women and girls and marginalized groups.

2. Incorporate technology and broadband into job training and continuing education

Given the rapid pace of technological change and the pressing need to address socio-economic challenges such as high unemployment among youth, governments should provide the necessary financial incentives to support technology and high-speed broadband adoption in all activities designed to create new jobs and open up prospects for lifelong training and employability in the emerging knowledge society.

3. Teach ICT skills and digital literacy to all educators and learners

Governments should prioritize the redesign of education systems in their national education agendas so as to better respond to the challenges of the ongoing digital revolution. Empowering teachers and students to use technology is central to improving education and the assessment of learning.

4. Promote mobile learning and OERs

Policy-makers should introduce policies and incentives promoting the development of OERs and encouraging the wide-scale use of mobile technology at all levels and in all forms of education, thereby facilitating access to quality learning and teaching resources.

5. Support the development of content adapted to local contexts and languages

Governments and organizations should invest in an ecosystem, not just in technology, by supporting online educational applications and services with local content and in local languages.

6. Work to bridge the technological divide between countries

Policy-makers should continue efforts to bridge the digital and knowledge divides between developed and developing countries by promoting international collaboration and partnerships. There is no doubt that broadband is a great education enabler and that the future of education at all levels and in all forms is inextricably linked to the benefits offered by affordable high-speed connectivity. The fact that a number of developing countries are not on track to achieve their internationally agreed goals in education by 2015 shows that more efforts than initially anticipated will have to be deployed by all stakeholders involved – international organizations, governments, education authorities, IT providers, telecommunications operators, civil society and the private sector. We sincerely hope that the examples provided in this report will encourage more and more developing countries to enact comprehensive plans and initiatives that leverage the potential of broadband to promote lifelong learning and achieve high-quality and inclusive education for all.

In the Asia-Pacific region, the recommendations made by the Broadband Commission require significant efforts given the size of the population, geographic variation, and socio-economic diversity and language barriers.

An analysis of the ICT Development Index (IDI), a composite index combining 11 indicators into one benchmark measure that serves to monitor and compare developments in ICT across countries, highlights differences in ICT developments globally, and regionally. Asia and the Pacific ranks fourth regionally in the IDI, with an average 2011 IDI value of 4.02, behind Europe, CIS and the Americas but ahead of the Arab States and Africa. The Asia and the Pacific's average IDI value is slightly below the world average IDI value of 4.15 but has by far the highest coefficient of variation value, indicating that the level of ICT use and uptake between countries varies greatly and that countries in the region are at very different stages in terms of ICT development. The region has some of the world's top IDI performers: first and foremost, the Republic of Korea followed by Japan and Hong Kong (China). The top seven in the regional ranking display a similarly high level of ICT development, with IDI values of over seven, and are the only countries from the region to rank in the top 50 globally. Out of 30 countries in Asia and the Pacific region included in the IDI, 11 have a value of less than three. This reflects the diversity in the capability of the countries to harness ICT and accordingly the solutions applied would also need to be localized.

ITU has several ongoing projects and programs such as "Connect a School, Connect a Community", "M-Powering Development", "ITU Academy" aimed at empowering citizens, building capacity and connecting schools that can add synergy to the project. It also has specific programs aimed at enhancing ICT applications uptake as well as Human Capacity Building. During WTDC 2010, the ITU Members had identified "Broadband Access and Uptake in Urban and Rural Areas" as one of the five Asia-Pacific Regional Initiative with clear expected results. Towards its implementation (2011-2012), ITU together with partners (e.g. KCC, Centres of Excellence

partners) developed Generic Guidelines for the preparation of national wireless broadband master plans for the Asia-Pacific region and in particular assisted Nepal, Samoa, Myanmar and Vietnam by developing individual wireless broadband master plans for each country; assisted Bhutan, Bangladesh, Cambodia, Fiji, Indonesia, Pakistan and PNG to develop National Broadband Policies/Plans; trained around 700 participants in various areas of broadband infrastructure. The ITU also developed some applications based on country needs. WTDC 2014 RPM-ASP, the Members proposed (to be finalized by WTDC 2014) to retain the regional initiative for the cycle 2015-2018 with an expanded objective “to assist Member States in the development of broadband access in urban and rural areas and to support system construction to resolve social issues using ICT applications, including e-Health”, clearly reflective of the need to focus on the important aspect of promoting uptake of ICT applications.

Given that the national policies for better connectivity and infrastructure have been successfully in place for the last few years in many countries across the region, more attention should be given to building user capacity to effectively integrate technologies in their daily lives. This is also evident in what the Recommendation from the Broadband Commission Working Group on Education implies: improved connectivity and access is important but not enough. Empowering teachers and students to use technology should be central to improving education.

According to ICT in Development proponents, ICT plays a critical role in enabling inclusive and sustainable human development by providing people not only with access to information and services (“access”) but also with opportunities to participate in and contribute to the knowledge economy (“voice” and “networking”). It is expected that citizens in such a society can effectively leverage ICT to access, utilize, create, and share information and knowledge to promote sustainable development and to improve their quality of life. The African Leadership in ICT Program (2011) of GeSCI further observes that “ICT is regarded as an engine for growth and tool for empowerment, with profound implications for education change and socio-economic development.”

Correspondingly, our education system should not only train students on how to operate ICT but also prepare them in harnessing the transformation potential of ICT towards self-development, employment, and active participation in the knowledge society. Towards this end, UNESCO enumerates broad reasons for the promotion of ICT use in education, as follows:

- Development of ICT skills and competencies among students, as requirements in an ICT-rich workplace and society;
- Development of knowledge-society attributes among students, including higher order thinking skills, life-long learning habits, and 21st century skills (e.g. ability to think critically, communicate, collaborate, access, evaluate and synthesise information);
- Solution to structural problems and deficits in education systems, to cover e-governance; access to resources, knowledge, and expertise; teacher support.

Findings from the Innovative Teaching and Learning (ITL) Research (2011) indicated that ICT-enhanced innovative pedagogical activities in the classroom support student development of skills and knowledge that will help them thrive in the 21st century digital revolution age. Unfortunately, such innovative class activities are still exception than norm in formal schools and more often than not, ICT is used to reinforce traditional teacher-centered modes. This is a danger of overstressing ICT skills only – a case where a teacher knows how to use ICT but lacks skills on how to integrate ICT to enhance the 21st century pedagogy.

Realizing the importance of teachers' role in developing student 21st century skills and cultivating a responsible digital literate population, UNESCO has undertaken a number of initiatives in this area. Since digital literacy has an enabling and complementary role in the achievement of media and information literacy, UNESCO developed the Media and Information Literacy Curriculum for Teachers and Pedagogies of Media and Information Literacies. These publications serve as reference materials for those who wish to design and implement digital literacy programmes and are currently facilitating international cooperation in this field. Further tools and initiatives in this area include the development of Guidelines for Preparing National MIL Policies and Strategies, the setting up of a MIL University Network for research, policy advocacy and MIL online training courses, as well as the establishment of an International Clearinghouse on MIL in cooperation with the world Alliance of Civilizations. UNESCO has also developed the ICT Competency Framework for Teachers, and a Global Framework on MIL Indicators. The MIL Indicators are currently being pre-tested in Southeast Asia.

Another initiative that UNESCO has undertaken in this area is to strengthen the capacity of teacher education institutions in innovating their teaching practices to foster citizens for the 21st century digital society. The "Facilitating Effective ICT-Pedagogy Integration" project is one of the exemplar projects carried out between 2010-2013, training 400 teacher educators from seven beneficiary countries (Bangladesh, China, Malaysia, Pakistan, the Philippines, Thailand and Vietnam).

Central to the issue of MIL and digital literacy, is the issue of promoting greater access to high quality information, including educational materials. Not only do citizens need to be digitally literate, but the provision of freely available and adaptable high quality contents needs to be ensured. In order to expand equal opportunities to access quality educational materials, governments need to develop the appropriate policy frameworks.

Among many other initiatives, UNESCO and the Commonwealth of Learning have taken since 2010 collaborative initiatives to promote awareness of the value of Open Education Resources (OER), an innovative approach to promoting greater access to high quality of education through providing freely available and adaptable teaching and learning materials. UNESCO organized the Policy Forum for Asia and the Pacific Open Educational Resources that took place in April 2012 in Bangkok, to facilitate dialogues between policy makers and practitioners on the effective implementation of OER for better access to quality education of the region. This was one of the five regional forums that provided governments more focused opportunities to participate in the statement drafting process at the regional level before the World OER Congress that took place in June 2012 in Paris. The Paris OER Declaration, adopted during the World Open Educational Resources (OER) Congress was the first step for the development of policies supporting OER.

Closely aligned with the UNESCO priority thematic areas for 2014-2017, namely, "expanding learning opportunities through ICTs in Education" and "promoting global citizenship", this project aims to provide assistance to Member States in raising the awareness on the notion of more comprehensive digital literacy, covering not only ICT skills but also using ICT responsibly to contribute to a knowledge society, hence equipping citizens with competencies to engage more fully to global discourse and development in a sustainable manner.

An integrated approach is therefore necessary to develop and implement strategies that integrate new ICT technology with digital literacy including formal / informal education, developing digital communities, digital libraries, ICT dictionaries and skill development aimed at job creation and entrepreneurship development. UNESCO and ITU aim to develop an integrated strategy that can serve as guiding tools for ICT and Education stakeholders and assist countries in developing / implementing these strategies.

Beneficiary Country

Singapore

Project Objective(s)

The Project intends to:

1. Assist member States in developing their respective MIL and Digital Literacy strategies and roadmaps, including the effective integration of ICT in Education, building digital communities, digital libraries, ICT dictionaries, and skill building exercises aimed at job creation;
2. Assess the progress on MIL and Digital Literacy, at the national and regional levels, based on agreed upon definitions and Digital Literacy indicators (i.e. to establish baseline information and effectiveness of strategies);
3. Provide regional guidance on advocacy, capability building, and application/content development programmes to develop MIL and Digital Literacy among various sectors and/or communities, including fostering ethical, safe and responsible use of ICT; improving access to relevant digital resources (including Open Educational Resources); ICT-supported entrepreneurship;
4. Engage various stakeholders in implementing and sustaining the different components of the Digital Literacy Roadmaps.

Expected Results

Component 1. Development of MIL and Digital Literacy Strategies and Roadmaps

- 1a. Strategy Toolkit is developed containing definitions, indicators, elements, implementation models, country cases on MIL and Digital Literacy
- 1b. At least 20 Country-level and/or sector-level MIL/Digital Literacy roadmaps and programmes are developed and implemented

Component 2. Assessment of relevant levels

- 2a. Assessment tools are developed
- 2b. Assessment Results from 20 countries (i.e. to measure programme effectiveness) are determined, analyzed, and applied in developing / enhancing / implementing programmes
- 2c. Regional progress is shared via the online regional progress tracking dashboard

Component 3. Provision of Regional Guidance

- 3a. Regional Guidebook/s on key elements and procedures related to advocacy, capability building, and application/content development are developed and shared
- 3b. Library of recommended links, content, and applications is available to member states for use in country-level / sector-specific implementations
- 3c. Lesson, challenges, good practices, and country cases are shared

Component 4. Engagement of various stakeholders

Target Public-Private-Peoples' Partnership rate is reached through collaborative local implementations

Estimated Start Date

March 2014

Estimated Duration

60 months

Estimated Budget

USD 2,500,000

Main Activities

Component 1. Development of MIL and Digital Literacy Strategies and Roadmaps

- Experts' Meeting and Consultation Workshops for the development of the Strategy Toolkit (including definitions, indicators, guide procedures);
- Provide support in the development of national strategies and roadmaps, specific country-level activities to include:
 - a. kick-off meetings of ICT and education stakeholders,
 - b. local experts' meeting and consultation workshops to develop the national strategies and roadmaps/ implementation plans,
 - c. identification of and coordination with international and national partners based on local priorities,
 - d. conduct an advocacy campaign on the strategies/roadmaps.

Component 2. Assessment of relevant levels

- Experts' Meeting and consultation workshops for the development of assessment tools,
- Conduct of Assessment on Digital Literacy baselines and progress,
- Development and maintenance of a regional dashboard to monitor progress.

Component 3. Provision of Regional Guidance

- Development of a Regional Guidebook,
- Development of relevant applications and materials, including distance learning/ self-paced capacity building modules, advocacy materials, etc.
- Provision of technical assistance in the areas of localized advocacy, capability building, and content / applications development (including stakeholder meetings, seminars, Training of Trainers, regional campaigns, etc.),
- Gathering of lessons, challenges, good practices, and country cases via online portal, regional workshops/seminars, monitoring reports, etc.

Component 4. Engagement of various stakeholders

- Conduct of advocacy campaigns to attract stakeholders,
- Conduct of regional stakeholders' meetings to discuss priority areas, technical assistance, progress, etc. and share lessons, challenges, and good practices among country implementations.

Project Title: **Formulation of eGov Policy - Bhutan**

Source of Proposal: Ministry of Information & Communications, Bhutan

Contact: Dorji Wangmo - Policy & Planning Division, MoIC -
dwangmo@moic.gov.bt

Brief Description

The Royal Government of Bhutan has prioritized ICT development with the vision of building an ICT-enabled knowledge society, interpreted as an “intelligent society that learns to learn”.

With the increasing trend in use of ICT products and services and to reflect the pace of change in ICT sector, a clear, comprehensive and a consolidated e-Government Policy is essential. Currently, all the ICT policies and strategies are scattered and without such policy, achieving good governance would be farfetched. It is therefore identified as one priority activity in the 11 Five Year Plan (July 2013-June 2018) and also the eGov Master plan (2013-2018).

Beneficiary Country

Bhutan

Project Objective(s)

Develop a high level ICT/eGov Policy to enhance competitiveness, increase productivity, improve service delivery and economic development, which will promote greater social inclusion, and pave way for sustainable and good governance practice.

Expected Results

Develop a flexible and adaptive policy that will guide/help Bhutan transition from Governance to eGovernance.

Conducive eGov Policy environment created and increase productivity of all other sectors.

Estimated Start Date

January 2014

Estimated Duration

3 months

Estimated Budget

USD 30,000

Main Activities

The eGov Policy will cover four broad areas but not limited to:

Connectivity: A dedicated, high speed and secure ICT backbone infrastructure to roll out affordable internet access to benefit all communities in Bhutan.

Security: Establishment of BtCIRT (Bhutan Computer Response Team), secure Government Data Centre, conduct regular ICT security audit for mission critical system.

Service Delivery: Establish standards for websites, government emails, e-services, application security and common data hubs to enable interoperability (sharing of data and resources through single source of truth) with provision for supporting Dzongkha (National language of Bhutan).

Deployment: Enforce authorized ICT products and open source software to address current issues like system incompatibility, low cost of maintenance and ease procurement process.

Project Title: **MIIT/ITU Joint Seminar on ICT Policy and Regulatory Issues**

Source of Proposal: Ministry of Industry and Information Technology-China

Contact: Zicai Tang - Ministry of Industry and Information Technology - tangzicai@miit.gov.cn

Brief Description

The project will be held jointly by ITU and MIIT, with the aim to promote the capacity building of the officials of the MIIT and its provincial branches, and to facilitate the exchange of views between the experts and the Chinese participants.

Beneficiary Country

China

Project Objective(s)

Capacity building of the local officials and to facilitate the exchange of views between the experts and the Chinese participants.

Expected Results

Joint holding of the ITU/MIIT seminar on ICT Policy and Regulatory Issues in 2014

Estimated Start Date

August 2014

Estimated Duration

1 month

Estimated Budget

USD 40,000

Project Title: **The Development of Information and Communication Technology and Assistive Technology for Equitable Society**

Source of Proposal: Ministry of Information and Communication Technology, ICT Usage Promotion and Development Bureau, Thailand

Contact: Somsri Horkanya - Ministry of Information and Communication Technology, ICT Usage Promotion and Development Bureau -
somsri.h@mict.go.th
wannasiri.b@mict.go.th

Brief Description

The Ministry of Information and Communication Technology (MICT) has several actions to bridge the digital divide. The Development of Information and Communication Technology and Assistive Technology for Equitable Society is one project taking action for the Thai society in bridging the digital divide. This project aims to provide Information and Communication Technology (ICT) and Assistive Technology (AT) courses for all, including persons with disabilities, the elderly, and disadvantaged groups - to train people on how to utilize ICT and AT to enhance their quality of life. These results will be shared with Asia-Pacific member countries through the project's web portal which will be in English and Thai and include content on how to develop accessible website and how to develop DAISY for the blind.

Beneficiary Country

Thailand

Project Objective(s)

To facilitate the access and use of information by using information and communication technology and assistive technology and to urge the cooperation and development of the Information and Communication Technology and Assistive Technology for people including persons with disabilities, the elderly, and the disadvantaged groups in Asia-Pacific member countries for the advancement of Human Rights.

Expected Results

Web portal of digital contents of Information and Communication Technology and Assistive Technology and knowledge sharing among Asia-Pacific member countries. It should be deployed on a reliable server system with reasonable back up schedule. The web portal shall be promoted so that the public especially target group people know about the project. Follow up survey will be conducted to collect data for future development and ensure that it reaches the intended audience.

Estimated Start Date

January 2014

Estimated Duration

11 months

Estimated Budget

USD 148,000

Main Activities

- Survey for standardization of ICT and AT by each member country and with international standard including the need for common courses of ICT and AT;
- Design of web portal for the project;
- Development of ICT and AT courses;;
- Implement the project web portal;
- Announce the system to public and organize a follow up survey..

Background Information:

At present, the Ministry of Information and Communication Technology (MICT), Thailand is organizing the training of Information and Communication Technology and Assistive Technology for the Equity in Society for ASEAN Community we received a good participation from ASEAN member states. We provide ICT and AT courses through www.asean4all.org. This web portal consists of at least 2 web accessibility courses and 2 ICT and AT courses. Therefore, this web portal is intended for all, including persons with disabilities and the elderly can access and utilize it. This project will support knowledge sharing among people residing in rural areas by providing access to government information and interesting information using ICT. Since this project will be partly endorsed by government agencies, the web portal will have no access cost and the information shared in the website can be freely used. Therefore, the ICT and AT curriculum will be provided as online training on the website.

Project Title: The Development of Master Model for Smart Community in Thailand

Source of Proposal: Ministry of Information and Communication Technology, Thailand

Contact: Suchada Thanomsin Inluksana Chakreeves - Ministry of Information and Communication Technology - suchada.i@mict.go.th
thanomsin.c@mict.go.th

Brief Description

The Royal Thai Government has announced a national strategy as Thailand's Strategy to be used to move the country forward during 2013 – 2018 and foster socio-economic development. In order to boost growth in tandem with environmental conservation, budget allocations would place an emphasis on infrastructure development, increases in productivity, and human resource development for citizens to promote a better life quality. Various obsolete rules and regulations must be changed, so that the Government's way of working would gain more recognition internationally.

In response to the aforesaid national strategy, Thai government pointed out that priorities would be placed on the development of ICT Infrastructure throughout the country as well as enhancing e-Government services both centrally and locally for equitable access. In order to develop the model for local community e-Government in Thailand, the government has selected Nakhon nayok province, a central province located near Bangkok, to be a pilot area to initiate the smart community namely "Nakhon nayok Smart Province".

Under this initiative, the government aims to use ICT for free movement of information to overcome the physical bounds of traditional paper and physical based systems to the use of technology to enhance the access and delivery of government services. This will also improve the efficiency on service rendering, coordination and chain of command. Therefore promoting the carrying out of operations in a timely and cost effective manner, which will be beneficial to the public, the private sector and the knowledge society.

Besides, Thailand will invest more than 200 Million THB in 2014 to Nakhon nayok Province to advance full-scale Smart Community by developing Smart applications and upgrading ICT infrastructure in Nakhon nayok.

In this regard, Thailand would like to call for partnership in the development of a master model for Smart Community in Thailand before expanding to other countries in the future.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To improve the efficiency of service rendering, coordination and chain of command to facilitate timely and cost effective operations, this will be beneficial to all - the public, private sector and people.

Expected Results

Efficiency on management of the public sector will be improved;
Gross domestic products will be increased;

Estimated Start Date

October 2013

Estimated Duration

12 months

Estimated Budget

USD 6,000,000

Main Activities

- Project study, analysis, and design to cover all activities in Nakhon Nayok Province;
- System Development in 13 Major Applications;
- Communication network Development;
- System installment, testing, and adjustment;
- Training and evaluation;
- Open for public use.

3. Making a smooth transition from analogue to digital broadcasting



3. Making a smooth transition from analogue to digital broadcasting

Television has become more attractive as more communication channels. It is estimated that there were 1.4 billion households with at least one TV set globally by end 2012, corresponding to 79 per cent of total households. Around 95 million new households with a TV were added between 2008 and 2012. This confirms that TV reach is expanding and that more and more households are gaining access to TV services.

Digital transmission is rapidly replacing analogue as the de facto technology on account of its robustness and efficient use of spectrum, which allow better quality and more channel choice. Several countries have set deadlines for ending analogue terrestrial transmissions. These deadlines have been established on the basis of national digital switchover targets and/or international agreements.

Projects summary table

3. Making a smooth transition from analogue to digital broadcasting			
Code	Project Name	Source	Estimated Budget '000 USD
3.01	Support for Transition from Analogue to Digital Broadcasting	ITU	4,700
3.02	Sustainable and efficient Spectrum Management for ICT development in Asia-Pacific	ITU	840
3.03	Enhancing and stimulating innovation through the use of Amateur band	ITU	370
3.04	Asia-Pacific Regional Symposium for Broadcasting Regulators and the Industry & Media Innovation Awards	ITU	4,000
3.05	Convergence in Digital Broadcasting	ITU	500
3.06	Pacific Spectrum Management Harmonization	ITU	2,500
3.07	Spectrum Management	ITU	900
3.08	Automated spectrum management system	Bhutan InfoComm & Media Authority (BICMA)	100
3.09	Integrated National Spectrum Management and Monitoring System	Information and Communications Technology Office - Philippines	800
		Total	14,710

Project Title: Support for Transition from Analogue to Digital Broadcasting

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - Cosmas.Zavazava@itu.int

Brief Description

The project will assist identified countries in smoothly transitioning from analogue to digital broadcasting through the development and promotion of harmonized guidelines (policy and regulatory, economic, market and business development, and technologies and networks issues) for the development of roadmaps for the transition from analogue to digital broadcasting and the development of a toolkit for broadcasting policies and regulations, as well as human and institutional capacity building.

The project will address the regulatory, political, technological and economic challenges which the beneficiary countries will face when implementing the transition. It will bring together governments, regulators, service providers, civil society, private sector, regional and international organizations dealing with broadcasting.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of this project is to assist identified countries in smooth transition from analogue to digital broadcasting by developing harmonized transition guidelines and customized roadmaps and by strengthening human and institutional capacity in broadcasting in the region with the overarching objective to further develop broadcasting infrastructure and applications to maximize economic and social benefits and to serve national priorities in line with the objectives of the WTDC-10, WSIS and MDGs.

Expected Results

- Harmonized guidelines on policy and regulatory, technologies, network planning, customer awareness in business planning developed and approved for the development of roadmap for transition from analogue to digital broadcasting;
- Roadmaps customized for each country;
- Toolkit for broadcasting policies and regulations developed and available on-line;

- Training curricula developed; and
- Capacity on transition issues and broadcasting policies enhanced.

Estimated Start Date

July 2014

Estimated Duration

36 months

Estimated Budget

USD 4,700,000

Main Activities

The following main activities are foreseen for implementation of the project:

a. Multi-stakeholder (kick-off) meeting

At the start of the project, the project team will identify and contact the stakeholders of the region in order to present the project, review the priorities and prepare an initial assessment to be presented at a multi stakeholder (kick-off) meeting. This kick-off meeting would be convened with all project beneficiaries to formally launch the project, recall its objectives and solicit views from all segment of the society. It would confirm priorities and agree upon an implementation plan, introduce necessary adaptations within the limits set by the financial partners and establish a consultative mechanism for countries to gain public input. It will also be an opportunity to ensure and formalize the full commitment and participation of all beneficiary organizations and countries, which are essential partners in the successful implementation of the project. Support could also be sought from other UN agencies, international and bilateral organizations dealing with broadcasting. Results and recommendations of this meeting will guide the project staff in the preparation of the training activities and tools to be delivered.

b. Assessment of the situation

At the initial stage of the project, information gathering and assessment of the existing situation in each country will be carried out, taking into account results and recommendation of the multi stakeholder (kick-off) meeting. This analysis will determine areas of commonalities and differences amongst the countries and how to develop the roadmap with time frames for harmonization identifying the areas which could be addressed immediately, areas which can be harmonized with some modification of national processes and areas for future harmonization which will require significant preparatory work. During these studies, materials produced by ITU and by other organizations/institutions on the subjects will be collected and reviewed.

c. Development and validation of harmonized guidelines for development of roadmap

From this situation analysis, it is expected that draft recommendations and guidelines, which will facilitate the harmonization be prepared by ITU through a consultative process with the regional and national focal points as well as with other regional stakeholders on the areas selected at the multi-stakeholder (kick-off) meeting, among others :

- Policy and regulatory:
 - o Technology and standard policies,
 - o Licensing regimes,
 - o Frequency Management,
 - o Digital dividend,
 - o Analogue switch over policies (ASO).
- Market and business development:
 - o Consumer aspects,
 - o Business planning.
- Networks:
 - o Technology and standards applications,
 - o Networks architecture and planning.

These draft recommendations/guidelines will then require validation by countries in face-to-face workshops and their transfer to regional organizations for adoption/endorsement by the highest governing bodies.

d. National transposition/implementation (customization) and development of roadmap

Once guidelines have been validated, the project anticipates that direct assistance would be needed by the beneficiary countries to assist them in the transposition of these guidelines at the national level and in the development of their own roadmap (customization).

e. Development of a Broadcasting policies and regulations toolkit

In parallel, a toolkit for broadcasting policies and regulations will be developed in order to respond to the beneficiaries' needs for practical and relevant guidance in the era of digital transition and convergence. Regulators need to manage the transition from old to new environments, which raises a wide range of questions, involving the scope of authority of ICT regulatory institutions, approaches to licensing, competition policy, public broadcasting services and level playing field in the new environment. This Toolkit aims to provide the beneficiaries with reference material than can assist them with the design of effective and enabling regulatory frameworks to harness the latest technological and market advances as well as competition policy, issue of content, and access.

f. Capacity building

Capacity building is an important component of this project. Comprehensive training curricula tailored to regional and national needs of the countries will be developed and delivered to national experts in order to equip them with the necessary tools and skills for long-term sustainability and success in the project. Training curricula will cover the aspects of broadcasting regulatory framework but also the development and promotion of the roadmap for the transition to digital broadcasting in the beneficiary region/countries.

Project Title: Sustainable and Efficient Spectrum Management for ICT Development in Asia-Pacific

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

This project aims to provide assistance to countries in the Asia-Pacific region on spectrum management through their policy makers and regulators in managing scarce resource effectively. Apart from telecom Administrators, the project would also help ICT manufacturing Industry, satellite and wireless network operators and other stakeholders in achieving and enhancing their respective business models.

The key areas of consideration include amongst others:

1. Framework for satellite services
2. Type Approval of Radio and Telecom Terminal Equipment (R&TTE)
3. Interference Mitigation
4. Automated Spectrum Management Systems

These highlighted areas will be reviewed, confirmed or modified by the beneficiaries taking into account the specific and urgent need of the multi-stakeholders.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The initiative aims to assist the Administration and regulators of Asia-Pacific region in:

- Strengthening Administrations by fostering regional cooperation through the development and implementation of harmonized policies
- Developing frameworks and procedures for handling the issues related to Spectrum Management that address the requirements of national administrations while encouraging the development ICT industry in order to achieve an economy of scales through harmonization of policies and frameworks
- Introducing equitable systems for efficiently handling allocation, assignment and spectrum/frequency licensing issues
- Sustainable human capacity development to tackle challenges indigenously on long term basis

Expected Results

The following documents and activities are considered as the key outcomes of the initiative:

- Draft framework for undertaking Type Approval procedure for Radio and Telecom Terminal Equipment (R&TTE) in beneficiary countries efficiently.
- Draft principles and procedures for mitigation and resolution of inter and intra country interference problems.
- Draft framework toolkit to introduce licensing regime for satellite services of national and foreign satellite operators/ service providers.
- Assistance in procurement of automated Spectrum Management System and database, encompassing administrative and technical requirements.
- Development of national and regional expertise and strengthening of the institutional mechanisms and human capacity for handling spectrum issues in beneficiary countries.

Estimated Start Date

January 2014

Estimated Duration

18 months

Estimated Budget

USD 840,000

Main Activities

The main activities of the project are itemized hereunder:

- Identification and Engagement of spectrum managers and/or Managers of highlighted areas of Spectrum Management of Asia-p\Pacific region.
- Employ multi-stakeholder consultations and seek expert advice to develop regionally harmonized recommendations and guidelines for highlighted areas of Spectrum management and assistance in implementation of the recommendations for improving efficiency and effectiveness of national spectrum management procedures.
- Develop and enhance competencies of spectrum managers on Spectrum Management and Monitoring techniques through relevant regional and national training workshops.
- Develop appropriate mechanisms/guidelines/recommendations to address co-ordination issues and minimize cross border interference between affected countries.
- Technical field audits and multi-stakeholder discussions to evaluate the requirements and/or requests of a country for assistance in acquiring comprehensive automated Spectrum vis a vis the financial and technical position of the country.

Project Title: Enhancing and stimulating innovation through the use of Amateur band

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The objective of the project is to increase the use of the Amateur Radios and harness the full potential of the bands allocated of the Amateur Radio services through highlighting its potential use especially in EMCOMM and disaster response. In addition a passive realization of Administration of the importance of having procedures to regulate the cooperative use Amateur radio communication through qualified professionals.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to increase the use of the Amateur Radios and harness the full potential of the bands allocated of the Amateur Radio services through highlighting its potential use especially in EMCOMM and disaster response. In addition a passive realization of Administration of the importance of having procedures to regulate the cooperative use Amateur radio communication through qualified professionals.

Expected Results

- Identified the advantages of using amateur radiocommunication other than private entertainment
- Conducted a contest to promote the usage of Amateur radio band allocations
- Organized an event to encourage the innovation in using the Amateur radio band
- Identified the Coordination processes to operate and launch an amateur satellite (e.g. cube-set)
- A community based regional approach to disaster management.

Estimated Start Date

July 2014

Estimated Duration

12 months

Estimated Budget

USD 370,000

Main Activities

- Formulation of committee from the stakeholders and experts from ITU-R and ITU-D to undertake and manage the project activities including the contest. The committee would also decide the rules and procedures along with carrying out judgment duties based on the submitted logs.
- Identify the rules and related bands for the contest on the basis on the established procedures (possible liaison with IARU regional office).
- Disseminate information to the Amateur radio operators through coordination with focal points of ASP member Administrations and registered Amateur radio societies.
- Setting the criteria for awards and organizing the contest.
- Evaluate the entries as per the set criteria.
- Organizing an event to highlight the role of amateur radios especially in EMCOMM and disaster mitigation.

Project Title: Asia-Pacific Regional Symposium for Broadcasting Regulators and the Industry & Media Innovation Awards

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

In today's all-digital world telecom and broadcast industries are constantly being reshaped and boundaries are being redefined, if any. Industry leadership will require continuous strategic reorientation, for both market parties and regulators.

For broadcasting the changes are prolific and seem to be profound in their impact on the industry. One of the most important developments in recent years is a significant growth of non-linear media or broadcast services. These services include catch-up and time-shifted viewing or listening of the linear programming and true on-demand content. In addition, data services are being provided in support of the primary broadcasts, on devices which are often phrased as the 'second screen'.

These non-linear services are delivered across a wide range of Internet based platforms including fixed Broadband, 3/4/5-G Mobile and WiFi networks. Non-linear services are growing fast and are expected to continue to grow in the future. With increasing bandwidth on these Internet based platforms the delivery of linear or traditional broadcast services has become a possibility too, although it is debated to what extend it will.

At the same the quality of service is constantly being improved, most notably audio and video quality. High Definition Television (HD) is a must have and the introduction of Ultra HDTV, also called 4K TV, is already a fact and 8K is on its way. Technology advances are following each other in an ever increase pace and they are changing demands for capacity and spectrum.

With these numerous ways of receiving content and services consumer behavior is changing. In addition to the traditional shared family environment, the users are creating a personal environment where media services are enjoyed on an additional device (e.g. a personal or tablet computer or a mobile phone).

Clearly the above described changes and developments will have an impact on the industry's future. However the question is in what way and to what extent. For example, will traditional linear broadcasting remain and non-linear services will serve as an add-on or replace traditional broadcasting gradually? Or will consumer behavior continue to change and will family or social viewing disappear or remain strong?

Regulators have an important role in help shaping the future of the industry and should therefore have a profound understanding of these universal changes. Secondly considering their policy objectives and taking into account local circumstances they should set out their policies and adapt their regulatory framework accordingly.

The International Telecommunication Union (ITU), the Asia-Pacific Broadcasting Union (ABU) and the National Broadcasting and Telecommunications Commission of Thailand (NBTC) wish to initiate and jointly implement an initiative aimed at studying the global trends and market analysis particularly in the broadcasting industry as well as promoting international cooperation among policy makers, regulators, and the industry in the Asia-Pacific region.

It is in view of the organizations that national regulatory authorities need to have a comprehensive and profound understanding of the global broadcast trends and their impact on the market and regulatory framework.

It is expected that the initiative, upon agreement among partners, will be announced and launched at the “Connect Asia-Pacific Summit” to be held on 18th November 2013 in Bangkok, Thailand.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- Help governments formulate a clear vision on global broadcast market trends and the future role and position of their broadcasting industry;
- Provide important input to policy makers and national regulatory authorities in their strategic planning process and help setting long term regulatory objectives and measures;
- Provide a regular platform for knowledge sharing and networking among various stakeholders in the region;
- Promote and encourage creative contents and innovations in the industry;
- Promote international cooperation among international organizations, governments, national regulatory authorities, and the industry.

Expected Results

- Annual regional forum on broadcasting e.g. Asia-Pacific Regional Symposium for Broadcasting Regulators and the Industry;
- Annual Media Innovation Awards;
- Publications e.g. case studies, market analyses guidelines, etc. relating to broadcasting;
- Platform and framework for international coordination and cooperation e.g. forum, website;
- Direct country assistance e.g. technical assistance, expert assistance, is also expected subject to available resources and agreement with partners.

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 4,000,000

Project Title: Convergence in Digital Broadcasting

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Over the past years, sound and television broadcasting has been experiencing a technology revolution through the adoption of digitalization in many of its applications and adoption of techniques which see its content delivered via telecommunication platforms. Digital sound and television broadcasting not only increases its efficiency in spectral performance per service but also offers a greater range of program services and diversity of content. One example of this efficient use of spectrum opportunities for television broadcasting is presented for countries who might choose to take advantage of increasing use of the spectrum for other services through the so called “digital dividend” whereby the spectrum released by the closure of analogue television can be used for promoting migration to future digital television or re-assigning the spectrum to other wireless communications applications.

The sound and television broadcasting industries are now facing considerable challenges in the new communications environment to meet the demands of changing consumer behavior. Consumer viewing behavior is changing with an increasing use of the “2nd and 3rd” screen for television viewing, internet and broadband network delivery of television content, especially amongst younger audiences. Viewers now use a range of devices capable of receiving audio-visual content such as movies, TV, games, and so forth. We are also witnessing the increase in television like content being offered by broadcasters and internet service providers via traditional telecom networks using Internet Protocol TV (IPTV) and Direct to Home (DTH) services.

The method of viewing television content is fast changing and expanding and it is important for policy makers, regulators and the broadcasting and telecommunications industries to consider the changing behavior.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To implementing digital broadcasting strategies and plans toward building the infrastructure, increasing awareness, for sustainable growth and competitive global integration. The scope of this project is to assist the telecommunication and broadcasting sector stakeholders while raising their skills to address the emerging policy, regulatory and technical challenges from converged services, including implementation of digital infrastructure, IPTV and Interactive Multimedia Services. The project would provide knowledge toolkits, customized advisory to selected countries and conduct Seminars/workshops/training using the ITU Guidelines and Centres of Excellence.

Expected Results

The following outputs are envisaged:

- Capacity building on transition issues, broadcasting policies and regulations and human resources skill.
- Provide expertise in implementation of digital technology and infrastructure as well as new media technologies and IP based delivery systems.
- Assistance in the areas of frequency and coverage planning as a first step in digital implementation.
- Assistance in setting up Emergency Warning Broadcasting Systems “EWBS” to effect disaster risk reduction and help save human lives.
- Implementing of mobile broadcasting services and content exchange for the broadcasting organizations in the region.
- Setting up, on sub-regional level, of a system of pilot trials to study the features of the digital terrestrial television and TV studio production from country experience visit program which will include developing applications for persons with disabilities, aging, etc. In this effort, assistance will be obtained from industry partners in the manufacturing sector.
- Organize regional seminars / workshops on understanding the implementation of digital broadcasting standards (careful planning and optimal utilization of resources) including online training to enhance human resources development.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 500,000

Main Activities

- Multi-stakeholders/partners (kick-off) meeting. The meeting will formally launch the project and formalize the full commitment and participation of all stakeholders/partners.
- Assessment of the situation and development and validation of the recommendation.
- Implementation based on the recommendation.
- Capacity building to equip them with necessary tools and skills for long-term sustainability and succession in the project.

Project Title: Pacific Spectrum Management Harmonization

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Based upon request from Pacific Islands Member Countries, the “Pacific Spectrum Management Harmonization” project is designed to strengthen Pacific Islands countries among the ACP Group of States in the field of frequency planning and assignments, spectrum management and radio monitoring by fostering regional cooperation through the development and implementation of harmonized policies and practices for spectrum management, the establishment of national spectrum management system by means of advanced computer-aided system and human and institutional capacity building.

The project will in particular address the following topics:

- Spectrum policies for frequency allocation (including new services) in accordance with agreed policy framework;
- Regional and National Frequency Allocation Table (RFAT and NFAT) preparation;
- frequency coordination procedures and cross-border interference (e.g. Harmonized Calculation Method, HCM, European cross-border frequency coordination agreement);
- Spectrum management regime;
- Spectrum pricing (methods and procedures);
- Spectrum allocation for disaster/emergency communications;
- Advanced computer aided spectrum management system and tools; and,
- Human capacity building on spectrum management related subjects.

By supporting the development of an inclusive Information Society in the Pacific region, by fostering regional and global integration and by promoting the development of infrastructure and the use of ICT services and applications, the project aims to support the Forum Leaders’ decisions and to contribute to the implementation of, among others, the Forum Economic Ministers’ Action Plan, the Communiqué of the Pacific ICT Ministerial Forum 2011, the Pacific Digital Regional Strategy and the Framework for Action on ICT for Development in the Pacific (FAIDP), in line with the EU Agenda for Change.

The project will also contribute to the implementation of Regional Initiatives adopted by the WTDC-10 for the Asia-Pacific Region.

National involvement and participation from the countries and the regional organizations will be an important aspect of the project. Thus, deliverables and activities will be the result of a negotiated process involving the beneficiary countries. Also, to increase efficiency and impact of the project, to avoid/minimize duplication or overlapping and exploit synergies and complementarities, the project will ensure incorporation of past or current regional projects (from ITU or other organizations/institutions) and encourage cooperation with and participation of regional organizations (ROs) concerned as well as other stakeholders in the region who can provide inputs to the project.

Beneficiary Countries

Pacific Islands countries

Project Objective(s)

This project aims to strengthen regional organizations and countries of the Pacific in the fields of frequency planning and assignments, spectrum management and radio monitoring by fostering regional cooperation/harmonization through the development and implementation of harmonized policies and practices in spectrum management, the establishment of spectrum management system as well as the human and institutional capacity building with the overarching objective of Pacific countries competitiveness and socio-economic development, in line with the objective of the WTDC-10, the World Summit on the Information Society (WSIS), the Millennium Development Goals (MDGs), the Forum Economic Ministers' Action Plan, the Communiqué of the Pacific ICT Ministerial Forum 2011, the Pacific Digital Regional Strategy, the Framework for Action on ICT for Development in the Pacific (FAIDP) as well as the EU Agenda for Change.

Expected Results

- Recommendations and guidelines on spectrum management policies and practices in the region (including on cross borders interference and on pricing) developed and adopted;
- National and harmonized Regional Frequency Allocation Tables (NFAT and RFAT) developed (including frequency allocation for disaster/emergency communications);
- Advanced computer aided spectrum management system, based on SMS4DC, established as required;
- Capacity/skills on various aspects of spectrum management and monitoring techniques in beneficiary countries enhanced.

This list will be reviewed and confirmed or modified by the beneficiaries at stakeholders' meeting to be held at the start of the project.

Estimated Start Date

March 2014

Estimated Duration

48 months

Estimated Budget

USD 2,500,000

Main Activities

- a. Multi-stakeholder (kick-off) meeting: At the start of the project, a multi-stakeholder (kick-off) meeting would be convened with all project beneficiaries to formally launch the project, recall its objectives, solicit views from relevant stakeholders. This meeting would review and confirm or modify priorities and agree upon an implementation plan, introduce necessary adaptations within the limits set by the financial partners and establish a consultative mechanism for countries to gain public input. It will also be an opportunity to ensure and formalize the full commitment and participation of all beneficiary organizations and countries as well as to get support from other organizations/institutions involved in spectrum management.
- b. Harmonization of spectrum management policies and practices: Information gathering and assessment of the existing situation in each country with regard to the priorities selected at the kick-off meeting will be carried out. From this situation analysis, draft recommendations and guidelines, which will facilitate the harmonization, be prepared by ITU through a consultative process with participating government, regional organizations and other stakeholders from the countries. These recommendations/guidelines will be validated by the beneficiary countries in face-to-face workshops and then transferred for formal adoption channeling.
- c. Capacity building: Capacity building is critical for the success of the project. Training will be provided on application of the new spectrum management system, particularly on administrative features, technical related aspects as well as on monitoring techniques. An agreement on frequency coordination and cross-border coordination procedures and Regional Frequency Allocation Table (RFAT) would be reached/signed among the participating countries.
- d. National transposition (customization): Direct assistance will be provided to help countries to convert the adopted recommendations into national policy, legislation and practices and to prepare and deliver related training to the appropriate personnel at national level. In addition, assistance in the preparation of the National Frequency Allocation Tables (NFAT) will be provided as well as training on how to update it after relevant World Radiocommunication Conference, if necessary.
- e. Establishment of Comprehensive Advanced Computer Supported Spectrum Management System: This activity is dedicated to the establishment of national spectrum management system, including high resolution map, by means of an advanced computer supported Spectrum Management System based on SMS4DC - encompassing administrative, technical and geographical information system requirements - and assistance in incorporating NFAT and RFAT into the software and in transferring and updating existing data to the new database structure.

Project Title: **Spectrum Management**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The Asia - Pacific region is home to some of most vibrant broadband wireless markets in the world. With the rapid growth of mobile and wireless services, there is significant pressure on traditional spectrum management practices adopted by the policy makers and regulators. This has in turn generated a high demand from ITU Members to update the spectrum management frameworks, processes and skills.

This project aims to provide assistance to countries in the Asia-Pacific region on spectrum management to policy makers and regulators in managing this scarce resource effectively, which would result in an improved enabling environment and effective deployment of these services to the users.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The objective of the project is to assist ITU Members in updating their spectrum management frameworks and processes include :

- Assessment of existing spectrum management framework;
- Creating / revising relevant policy, regulatory and monitoring tools linked with Spectrum Management;
- Implementing over intermediate term.

Expected Results

- Comprehensive master plan guideline tool on Spectrum Management taking into account various technical, policy and regulatory approaches;
- Master plan for deployment of Spectrum Management framework in their country / organization;
- Learning tools on Spectrum Management;
- Human capacity building in these areas.

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 900,000

Main Activities

Phase 1:

- Assessment of current situation in Asia-Pacific region in relation to spectrum management through surveys and telephonic interviews;
- Assistance to five Members in assessment of spectrum management framework, existing legislation, policies and regulations;

Phase 2:

- Identification of five countries for concentrated assistance on spectrum management;
- Assistance on Development of appropriate legislation, policies and regulations;
- Assistance on Development of appropriate processes and procedures;
- Organisation of a regional workshop to share best practices and lessons learnt;
- Organisation of two regional training workshops and two online courses on spectrum management related issues to build appropriate skills;
- Provide strategic assistance on implementation of the developed frameworks through in-country and online assistances over a 6 month period;
- Develop a project final report and publication.

Project Title: **Automated Spectrum Management System - Bhutan**

Source of Proposal: Bhutan InfoComm & Media Authority (BICMA), Bhutan

Contact: Jigme Wangdi / Dorji Wangmo

Bhutan InfoComm & Media Authority (BICMA) - jigme@bicma.gov.bt

Brief Description

Bhutan InfoComm and Media Authority (BICMA) are mandated to regulate the ICT (including the Media) sector in Bhutan. Managing the radio frequency spectrum is one of the core responsibilities of BICMA.

The spectrum management has been an important task to enable interference free radio-communications and plan for any future technological development. Until today, Bhutan has been manually planning, allocating, assigning and monitoring the radio frequencies. However, due to increase in users and complexity of technology, the assessment and management of spectrum and its usage proved to be inaccurate and not precise, which likely adds to the poor spectrum management.

Therefore, such manual assessment of spectrum planning and the work demanded for an automated system to precisely and efficiently manage and assess the spectrum usage in the country.

Although, we tried to explore the benefits of the software developed by ITU for the developing countries (SMS4DC), however, we couldn't cater to the local needs as it appears to be technically too complex-to-use as well as not much user-friendly in relation to the spectrum management in Bhutan. We have only one Fixed-monitoring station which has to be operated manually and it has been with much difficulty without the automated spectrum assessment systems.

Beneficiary Country

Bhutan

Project Objective(s)

Develop a simple systematic automated spectrum management system for Bhutan in order to assess the spectrum usage professionally and efficiently. Subsequently, it is aimed at providing the interference-free radio-communication service for the users.

Expected Results

- Recommend the simple and effective automated spectrum assessment system with hardware and software for Radiocommunication division, BICMA.
- Develop a report consisting of:
 - a) current spectrum assessment system of BICMA; and
 - b) the need of effective automated spectrum assessment system for the country.
- Develop the strategic roadmap for BICMA in-terms of spectrum management through the automated system.
- Train the Authority officials with regard to the implementation of SMS4DC.

Expected outcomes:

- Develop the roadmap on effective automated spectrum assessment system.
- Develop a simple version of automated spectrum assessment system for Bhutan with hardware and software.

Estimated Start Date

January 2014

Estimated Duration

6 months

Estimated Budget

USD 100,000

Project Title: **Integrated National Spectrum Management and Monitoring System**

Source of Proposal: Information and Communications Technology Office - Philippines

Contact: Louis Napoleon Casambre - Department Of Science And Technology - Information And Communications Technology Office - louis.casambre@icto.dost.gov.ph; george.tardio@icto.dost.gov.ph

Brief Description

Establishment of National Spectrum Management and Monitoring System (INSMS) (including database) as included in Recommendation ITU-R SM.1537, allowing remote access to system resources, transparent spectrum assignment, automated measurement of signal parameters and automatic violation detection including tools to support national spectrum engineering and modern graphical user interface (GUI).

The deployment of Integrated National Spectrum Management and Monitoring System shall enable the country's computerized issuance of licenses or authorizations and checking that the frequencies are used in accordance with the provisions of the authorization or license and measures the spectrum occupancy by means of monitoring stations. The motivation behind the INSMS is transparency and efficiency in governing the scarce spectrum resources; it is an answer to both service providers and customers' complaints of protracted processing and issuance of license, signal interference and poor connectivity.

The project shall be implemented in three phases. The first phase shall be the study of the current status and existing systems and process as regards the spectrum management and monitoring in the country. The second phase shall include simultaneous deployment of both spectrum management and monitoring system. Separate spectrum management and spectrum monitoring solutions shall be assumed during this phase. The third and the final phase shall be the integration of both systems with defined interface, e.g. spectrum management system users can command spectrum monitoring assets and spectrum monitoring users can query spectrum management information, among others.

Beneficiary Country

Philippines

Project Objective(s)

- Expedite frequency planning and allocation through the installation of software and applications that would easily produce the national radio frequency allocation table, among others.

- Build a transparent spectrum assignment system through the installation of an information system that can easily analyze spectrum availability and spectrum assignment methodologies to produce the master list of national radio frequency register, among others.
- Automatically identify the illegal use of the spectrum through the installation of a network of frequency scanners/monitoring stations in strategic areas of the country.
- Apprehend illegal users through the use of global positioning systems and location determination systems.

Expected Results

Integrated National Spectrum Management and Monitoring System with database and a set of administrative and technical features and capabilities for Spectrum management and Spectrum monitoring activities, allowing remote access to system resources, transparent spectrum assignment, automated measurement of signal parameters and automatic violation detection including tools to support national spectrum engineering and modern graphical user interface (GUI).

Estimated Start Date

January 2014

Estimated Duration

27 months

Estimated Budget

USD 800,000

Main Activities

Major project activities are as follows:

- Hiring/Assignment of ITU Expert on the matter;
- Kick-off and mobilization activities;
- Study of current status and existing systems and processes in the country, including report finalization;
- Capability trainings/seminars;
- Preparation and finalization of Terms of Reference and defining specifications for a) Spectrum Management System, b) Spectrum Monitoring System, and c) the Integrated National Spectrum Management Monitoring System";
- Consultations/workshops with concerned government and private stakeholders;

- Procurement Activities for hardware /software components including delivery (phase two coverage);
- Installation activities including development/customization of the application software (phase two);
- Testing and commissioning (phase two) including operationalization;
- Procurement Activities (interface requirements) including hardware /software components including delivery (phase three);
- Testing and commissioning of integrated system;
- Launching and operationalization;
- Final Project Reporting (documentation).

4. Saving Lives and Preserving Our Planet: Emergency Telecommunications and Climate Change



4. Saving Lives and Preserving Our Planet: Emergency Telecommunications and Climate Change

Today, no region and no country could be said to be immune to the challenges brought about by natural disasters and climate change. Information and communication technologies play a pivotal role in disaster risk reduction, disaster monitoring, prediction and detection. In the immediate period before disasters strike, ICTs are used to disseminate early warning alerts that save millions of lives. In the immediate aftermath of disasters, ICTs are used as a medium through which humanitarian actors coordinate search and rescue operations, and the distribution of food, and medication to the victims. On the other hand, through passive and active remote sensing supported by satellite technology, society is able to monitor changes in climate and the environment which are crucial particularly for the livelihood of coastal countries and Small Island developing states that are constantly threatened by sea rise.

Projects summary table

4. Saving Lives and Preserving Our Planet: Emergency Telecommunications and Climate Change			
Code	Project Name	Source	Estimated Budget '000 USD
4.01	Emergency Telecommunications and Climate Change	ITU	80,000
4.02	Satellite Rural Communications Capacity Solutions for LSE	ITU	20,000
4.03	ICTs and Promoting Road Safety in the Asia Pacific Region	ITU	500
4.04	ICT & Improving Road Safety in Bhutan	Road Safety & Transport Authority (RSTA), Ministry of Information & Communications	250
4.05	Use of Broadband to provide for enhanced monitoring of dangerous multi hazards and enhanced disaster management	TRR	3,000
4.06	ICTs and promoting Road Safety	Ministry of Posts and Telecommunications(MPTC)	40
4.07	Satellite Based Telecommunications System for Disaster Management and Climate Change Applications for the South Pacific Island Nations.	Japan Telecommunication Engineering and Consulting Service	22,000
		Total	125,790

Project Title: **Emergency Telecommunications and Climate Change**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Emergency telecommunications/ICT play a critical role in the immediate aftermath of disasters by ensuring timely flow of vital information that is much needed by government agencies and other humanitarian actors involved in rescue operations and providing medical assistance to the injured. Integrating national Information and Communication Technologies in disaster prediction, detection and alerting would ensure the effectiveness of disaster risk reduction as well as adaptation to climate change.

The World Telecommunication Development Conference (WTDC, Hyderabad 2010), identified natural disasters as a major threat to socio-economic development and adopted emergency telecommunications as one of the regional initiatives for almost all the regions including the Asia and the Pacific (ASP). In light of this, ITU has been enhancing national capacity, through the development of Regional and National workshops, hands-on training and symposia on the use of ICTs for disaster management, as well as providing satellite emergency telecommunications equipment to restore vital communications in countries that have been struck by major disasters.

In parallel, it has designed the ITU Framework for Cooperation in Emergencies (IFCE) to primarily deliver and deploy telecommunications/information and communications resources to countries, humanitarian actors, and victims of disasters in a timely manner whenever and wherever disasters may occur through the use of transportable, easy to deploy, and reliable systems that are non-exclusive. Principally, the IFCE extends its services to all phases of disaster management.

The overall Project objective will build upon existing ITU experience and expertise in order to assist countries in the region to prepare, alert, respond and recover from disasters. Similarly, it is intended to assist countries in the use of ICTs as enablers to adapting better to climate change and mitigate its impacts.

This Project is directly related to the Asia-Pacific Regional Initiative 2 which was approved at the World Telecommunication Development Conference based on the needs identified by the countries in Asia-Pacific requesting assistance in all phases of disaster management.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The overall Project objective is to assist countries in the region to prepare, alert, respond and recover from disasters.

Expected Results

Deployment of Early Warning Systems;

Development of Business Continuity Plans;

Designing and Development of National Emergency Telecommunication Plans;

Designing of Climate Change, Adaptation and Mitigation Plans.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 80,000,000

Project Title: **Satellite Rural Communications Capacity Solutions for LSE**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The Pacific Islands comprise 20,000 to 30,000 islands in the Pacific Ocean. The region's islands are classified into two groups, high islands and low islands. Volcanoes form high islands, which generally can support more people and have a more fertile soil. Low islands are reefs or atolls, and are relatively small and infertile. Melanesia, the most populous of the three regions, contains mainly high islands, while most of Micronesia and Polynesia are low islands. In addition, there are many other islands located within the boundaries of the Pacific Ocean that are not considered part of Oceania. This project aims to develop low cost, reliable, diverse satellite communications capacity for the socio-economic development of the Pacific Islands region utilizing un-used satellite capacity. To get the best return on investment, the same telecommunications/ICT infrastructure/resources will be used for emergency telecommunications to ensure public safety when disasters strike.

Beneficiary Countries

Pacific Islands countries

Project Objective(s)

- 1 To understand the present situation of satellite usage in the Pacific Island countries and availability of un-used satellite capacity;
- 2 To develop strategies and identify best options for rural/remote communication development in the Pacific region utilizing un-used satellite capacities available;
- 3 To develop low-cost, reliable, and diverse satellite capacity for the Pacific Islands region;
- 4 To integrate emergency communications into the established community e-centres and/or develop a deployable emergency communications package to be transportable and easy deployable for disaster management and relief work to any concerned country in the Pacific Islands region;
- 5 Collect and develop a bundled software packages including, but not limited to: Operating System; Office applications; Multi-media (e.g. audio, photo, video) editors and managers; Content Management System for development of personal and/or community portals; Applications for community radio; Security software;
- 6 Provide available and useful ICT applications (both mobile- and computer-based) for health, education and agriculture sectors;

- 7 To develop a network management system (NMS);
- 8 To build/enhance human capacity for local communities and individuals by organizing training-of-trainers and user training as well as outreach programme.

Expected Results

- 1 Report of the feasibility study;
- 2 Phase 1: 16 pilot sites of rural/remote community e-centres;
- 3 Phase 2: 32 sites of rural/remote community e-centres;
- 4 Phase 3: 52 sites of rural/remote community e-centres;
- 5 Phase 4: Network Management System and ICT services and applications;
- 6 Integrated emergency communications and/or deployable emergency communications package;
- 7 Final report including (but not limited to) assessment, options diagnosis, solutions with technical specifications, monitoring and evaluation, and lessons learnt.

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 20,000,000

Main Activities

Phase 1:

- Conduct a feasibility study to assess existing satellite communications capacity and on building/enhancing the capacity for the Pacific Islands region, identify partners and providers that have un-used satellite capacities in the Pacific, regulatory issues to be addressed and provide recommendations for suitable business models.
- Based on the feasibility study, finalize the technical specifications of satellite system and satellite policy aspects, in collaboration governments, satellite service providers, and local telecom operators.
- Preparing the Tender document, circulating the tender document and requesting for Proposal (RFP).
- Bid evaluation and selection of the supplier(s).
- Installation and commissioning for the first 16 community e-centres.

Phase 2:

- Review performance and technology options of the first phase.
- Monitor and evaluate the community e-centres established in the first phase.
- Installation and commissioning for another 32 community e-centres.
- Assess user requirements for services and applications.
- Organize training-of-trainers programme.

Phase 3:

- Review performance and technology options of the previous phases.
- Monitor and evaluate the community e-centres established in the previous phases.
- Installation and commissioning for another 52 community e-centres.
- Preparing the Tender document for development of ICT services, applications and network management system.
- Bid evaluation and selection of the supplier(s).
- Facilitate training-by-trainers programme.

Phase 4:

- Monitor and evaluate the community e-centres established in the previous phases.
- Installation and commissioning for another 52 community e-centres.
- Develop ICT services, applications and the network management system.
- Organize and facilitate user training (by trainers).

Post-implementation:

- Monitor and evaluate the community e-centres established under the project.
- Develop a project final report.

Project Title: ICTs and Promoting Road Safety in the Asia Pacific Region

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

ICTs and Improving Road Safety was the theme of the World Telecommunication and Information Society Day 2013.

During its celebration, road traffic safety was identified as a global concern for public health and injury prevention. Every year, 1.3 million people die in traffic related accidents and another 20-50 million people are injured mainly in developing countries around the world. As a result, Governments and individuals suffer an estimated USD 518 billion in global economic loss.

Driver distraction and road-user behavior, such as “text messaging” and interfacing with in-vehicle navigation or communication systems while driving, are among the leading contributors to road traffic fatalities and injuries.

This Project will contribute to efforts in improving road safety through ICTs.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To develop national policies, programmes and/or educational initiatives in the use of ICTs to improve road safety, taking into account the risks associated with the unreasonable use of ICTs and driver distraction, as well as the benefits of ICTs and vehicular safety technologies, in order to promote road safety.

Expected Results

1. Improved road safety
2. “Policy and Strategy Toolkit on ICTs and Promoting Road Safety” for use by Member States and Sector Members

Estimated Start Date

June 2014

Estimated Duration

18 months

Estimated Budget

USD 500,000

Main Activities

1. Conduct study and publish compilation of best practices on ICTs and Promoting Road Safety
2. Develop and publish “Policy and Strategy Toolkit on ICTs and Promoting Road Safety”
3. Conduct related pilot projects, public awareness materials, programmes and fora.

Project Title: **ICT & Improving Road Safety in Bhutan**

Source of Proposal: Road Safety & Transport Authority (RSTA), Ministry of Information & Communications, Bhutan

Contact: Dorji Wangmo- Policy & Planning Division, MoIC -
dwangmo@moic.gov.bt

Brief Description

Bhutan's economy is growing rapidly and road transportation which is primary mode of transport is also growing rapidly. Number of vehicles on road is increasing at a rate of 10% per annum which is leading to congestion, increased Green House Gas and most importantly safety issues. Having realized that new infrastructure alone cannot solve all transport problems of safety, congestion and emissions, an innovative solution has to be explored.

Intelligent Transport System (ITS) is the solution and hence a priority project of the country. It will lead to overall improvement of the transport system which takes into account speed monitoring, tracking movement of public transport buses, locating accident spots and in real time the travel conditions of the major highways. Any assistance relating to improvement of road safety using ICT is solicited.

Road Safety and Transport Authority, Ministry of Information & Communications will be the lead agency with Traffic Division of the Royal Bhutan Police, Department of Roads and the National Environment Commission as collaborating agencies.

Beneficiary Country

Bhutan

Project Objective(s)

Develop a feasibility study and implement ITS system in Thimphu (Capital city) as a pilot project, with capacity building for sustainable management.

Expected Results

Expected results:

- a) ITS feasibility report and ITS roll out plan.
- b) Pilot implementation in the Capital City (Thimphu), the leanings of which will later be replicated to other cities/towns in the country.
- c) Strengthen the capacity of the Department and its personnel for sustainable management of the transport system.

Expected outcome:

- Achieve safe and efficient transport system in the country.

Estimated Start Date

January 2014

Estimated Duration

18 months

Estimated Budget

USD 250,000

Main Activities

- a) Feasibility study
- b) Preparation of the roll out plan
- c) Develop institutional framework required to rollout the ITS project in Bhutan
- d) Implementation of ITS in Thimphu (pilot)
- e) Awareness and capacity building

Project Title: Use of Broadband to Provide for Enhanced Monitoring of Dangerous Multi Hazards and Enhanced Disaster Management

Source of Proposal: TRR Vanuatu

Contact: Fred Samuel - OGCIO - fsamuel@vanuatu.gov.vu

Brief Description

Vanuatu is rated by the United Nations as the country on Earth most threatened by the widest variety and intensity of potential natural disasters. Besides earthquakes, cyclones, tsunamis, drought, floods and pests, the threat of volcanic eruption is very high since some of the ten most dangerous volcanoes on the planet (Mt. Manaro on Ambae/Aoba, Mt. Benbow and Mt. Marum on Ambrym, and Mt. Yasur on Tanna) are located in the country.

These and three other active volcanoes in Vanuatu pose a threat due to possible phreatic-magmatic explosions, lahars, pyroclastic flows, ash fall, and SO₂ outgassing. Mt. Manaro is considered particularly dangerous, since if its large (2 km-wide) crater lake (holding 60 million cubic meters of water) comes in direct contact with the lava chamber below, an explosion approaching the size of the famous Krakatoa event in 1883 could occur.

Major volcanoes in developed countries are monitored with up to 35 monitoring stations of various types per volcano. This arrangement allows for detailed analysis of the magma movements inside the mountain and, thus, provides more detailed (and better) information for emergency managers and evacuation planners.

In Vanuatu most of the major volcanoes have only up to 2 monitoring stations. These stations have recently been linked via narrowband to the archipelago-wide Government Broadband Network (GBN), operated and maintained by the OGCIO; which is placed in the PMO. Thus, for the first time the Vanuatu Geo-Hazards Department has real-time data flows from all monitoring stations to its headquarters in the capital, Port Vila. A real time display board shows all activity, and a major increase in volcanic activity can trigger an immediate response; including an airborne surveillance of the volcano, or a site visit by a team of volcanologists.

However, under the current level of planned government funding for the installation of new monitoring stations, it will take ten years or more to install only a sufficient number of monitoring stations - on average (only) four to six per volcano - to provide for only an adequate (not detailed) monitoring of volcanic activity.

Beneficiary Country

Vanuatu

Project Objective(s)

This project aims to accelerate this effort and priority down to three years – from 10 years – as a mechanism to protect citizens of Vanuatu much earlier. It includes the cost of equipment, construction, establishment of more links to the GBN, and related training, awareness, and capacity-building. These latter efforts will include traditional workshops, but also innovative ICT tools and content.

Expected Results

1. **Monitoring stations:** The number of monitoring stations will be increased and the range of data collected will be expanded to include all types: seismic, ground deformation, outgassing and visual. A table in the uploaded file shows the current and planned installations.
2. **Links to the iGov GBN:** Narrow or broadband connections to the GBN will be established for each station; generally using line of sight microwave transmission.
3. **Training and awareness related to monitoring stations:** Land disputes in Vanuatu are common and often involve local residents claiming the right to payment from installers of towers, buildings and new equipment. Non-payment can lead to sabotage of the equipment. Therefore, training, awareness and capacity building, particularly of local villagers near the installation, achieving “buy-in” for the benefits of the stations, persuading local chiefs to support the program, and hiring villagers to maintain and protect the installations, are all essential.
4. **Training and awareness related to emergency preparedness in the most-vulnerable areas:** Volcano and other disaster warnings are useless if the warning is not transmitted promptly, properly or is not heeded. Disaster literature shows that persons in a wide range of cultures often do not respond to warnings until several have been received; preferably from different sources. This project component will develop innovative multi-media training materials designed to raise awareness and educate villagers in high danger volcanic areas about the possible threats. It will also be designed to rejuvenate the Community Disaster Committees, and provide them with essential information on activities around receipt and transmission of volcano warnings from the new enhanced network.

Expected results include the following:

- Installation of at least 25 multi hazards monitoring stations: Volcano, climate and weather.
- Construction of all necessary links from the stations to the GBN. Enhancement and upgrading of the GBN in areas where this is required; particularly for volcanic monitoring.
- Every Provincial Headquarters’ in Vanuatu to have equipment to monitor volcano, weather and climate change activity. Training of villagers, especially chiefs and Community Disaster Committees (CDC) members, in villages closest to the monitoring stations, regarding the value and importance of the stations to residents, and the need to protect the stations from attack due to land disputes or claims.

- Development of a detailed Report documenting the successes and lessons learned from the project: with enough detail to provide for replication in other similar threatened settings in less developed countries.
- Training of local staff to operate, maintain and utilize the new systems in an effective manner.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 3,000,000

Main Activities

The major steps in the effort are described below.

Step 1: Review current plans and specifications for installation of new monitoring stations and allied links.

Step 2: Develop detailed sequencing plans for installation of high priority monitoring stations, conduct detailed site assessments, liaise with local chiefs and villagers, obtain their “buy-in,” procure contractors to install the site foundations (these are complex and require a massive concrete footing for stability), and install and test the monitoring stations.

Step 3: Simultaneously with Step 2, construct links with the GBN and undertake testing of the links.

Step 4: Procure, install and test equipment in the EOC and Geo-Hazards Department.

Step 5: Develop preliminary training materials for warning, CDC operations and evacuations related to volcanic activity. Utilize multi-media tools (never before used at the village level in Vanuatu volcano training). Test these, then prepare and procure final materials, and undertake training, awareness and capacity building.

Step 6: Link and tie each major milestone of the Project into appropriate celebrations of the ITU’s World Telecommunication and Information Society Day (WTISD). This event in Vanuatu in 2013 was one of the largest events of the year. It involved a parade of 1000 citizens and representatives of organizations, and a crowd of 3000 who listened to speeches, visited booths, and watched entertainment related to the themes. This project will be highlighted at each WTISD, with a presentation from the main stage on the effort, a booth with relevant materials, media releases, stories in the press, and discussion of the project by the Prime Minister.

Project Title: ICTs and Promoting Road Safety - Cambodia

Source of Proposal: Ministry of Posts and Telecommunications(MPTC), Cambodia

Contact: May Phoeung LE - General Department of Posts and Telecommunications, Ministry of Posts and Telecommunications(MPTC)
- phoeung@camnet.com.kh/mey_phuong@yahoo.com

Brief Description

The overall Project is aims to assist country to develop national policies, programmes and/or educational initiatives to encourage the use of ICTs to enhance road safety, taking into account the risks associated with the unreasonable use of ICTs and driver distraction, as well as the benefits of ICTs and vehicular safety technologies, in order to promote road safety. The application of Intelligent Transportation Systems (ITS) is expected to improve the safety, management and efficiency of terrestrial transport, and to reduce the environmental impact of road transportation. This project is also in line with ITU Secretary-General's Call for Action World Telecommunication and Information Society Day 2013. Ministry of Posts and Telecommunications, Ministry of Public Work and Transportation National Road Traffic Safety Committee will be the lead agency with Traffic Police Department as collaborating agencies.

Beneficiary Country

Cambodia

Project Objective(s)

- To develop national policies, programmes and/or educational initiatives in the use of ICTs to improve the safety, management and efficiency of terrestrial transport.
- Estimation of possible technical solutions to ITS deployment in Cambodia and other members.

Expected Results

- Enhancement of traffic safety
- "Policy and Strategy Toolkit on ICTs and Promoting Road Safety" for use by Member

Estimated Start Date

March 2014

Estimated Duration

24 months

Estimated Budget

USD 40,000

Main Activities

- Conduct study and publish compilation of best practices on ICTs and Promoting Road Safety;
- Develop and publish “Policy and Strategy Toolkit on ICTs and Promoting Road Safety”;
- Workshop/Seminar on encouragement the use of ICTs to enhance road safety;
- Conduct related pilot projects, public awareness materials, programmes and fora.

Project Title: **Satellite Based Telecommunications System for Disaster Management and Climate Change Applications for the South Pacific Island Nations.**

Source of Proposal: Japan Telecommunication Engineering and Consulting Service Japan

Contact: Kader Hiroshi Pramanik - Japan Telecommunication Engineering and Consulting Service - pramanik@jttec.or.jp

Brief Description

The Pacific Ocean Region comprise of ~30 thousand islands scattered over approximately 54 million square kilometers of ocean, Of which approx.12 thousand islands are inhabited. Most of the Pacific Island Nations are a combination of small islands having vast distances between them, and with sparse populations.

Due to geographical locations with climatic conditions, Pacific island Nations are extremely vulnerable to climate change. The region is also strongly affected by natural hazards, causing disasters that affect national and social development. The adverse effects of climate change are a threat to the sustainable development, and the long-term effects of climate change may endanger continued existence of some islands. Increased atmosphere and ocean temperatures, greater rainfall variability, as well as increased frequency and intensity of extreme weather events may cause sea levels to rise

The Pacific will be leading this process as it will be the first region in the world to fully integrate Disaster Risk Management and Climate Change into a single overarching policy framework in 2015

Considering the developments in the pacific framework, this project presents to develop optimum cost, reliable, disaster management and early warning communications system for the socio-economic development of the Pacific Islands region utilizing satellite based network.

In an effort to achieve appropriate return on investment, the same ICT infrastructure and resources for emergency telecommunications to be used for usual ICT network services including; climate change data gathering, distance education support and public awareness information transmission to ensure public safety before, during and after any disaster strikes the area.

Beneficiary Countries

South Pacific Island countries

Project Objective(s)

Telecommunication's Requirement for Pre and post Disaster

Roles of Communication System (ICT)

- To gather/transmit seismic/meteorological, climate change data
- To share information on ensuing disaster risks
- To disseminate warning message to residents

- To create Public Awareness by providing training local inhabitants through regular drills and communication

Expected Results

Capable of monitoring and control all the countries disaster information Nationwide and monitor information of the region. Availability of ICT services and applications in e-commerce, Homepage building, e-Education, Agriculture/Fisheries and Health sectors. Community people able to use internet homepage

The network system when deployed will benefit more than 80% of population and improve quality of life, by increasing level of education with improved ICT services. The project will significantly increase access to affordable ICTs in 16 countries in the region in order to facilitate a technological environment in which all people, in both urban and rural areas, are able to gain maximum benefit from the opportunities offered by ICTs.

In line with the creation of national ISPs and IXPs and increasing national and international Internet connectivity, the project will strengthen the capacity of the countries concerned by providing cost-effective access to the Internet.

Estimated Start Date

January 2015

Estimated Duration

48 months

Estimated Budget

USD 22,000,000

Main Activities

- Installation of multi hazards monitoring stations: Volcano, climate & marine environment observation;
- Construction of all necessary links from the stations to the national and regional networks;
- Enhancement & upgrading of the existing networks in areas where there is volcanic & climate monitoring facilities;
- Every national and their state (provincial) Headquarters to facilitate with equipment to monitor volcano, weather status. climate change, and marine environment observation activities;
- Reporting, documenting of successes & lessons, replication for other similar threatened settings in small island nations;
- Wide scale capacity building with training of: Chiefs, villagers, community disaster committees members and local staff in villages and in Small Island.

5. Addressing Unique ICT Needs of Least Developed Countries, Small Island Developing States and Landlocked Developing Countries



5. Addressing Unique ICT Needs of Least Developed Countries, Small Island Developing States and Landlocked Developing Countries

ICTs are widely recognized as key drivers of private sector investment, employment and socio-economic development. The Asia-Pacific region has made positive progress in embracing ICTs and new technologies. However, while developed countries rapidly leverage the benefits of ICTs, the unique needs of Least Developed Countries (LDCs), Small Islands Developing States (SIDS) and Landlocked Developing Countries (LLDCs) must be addressed to ensure that all countries can use these technologies as a cross-cutting enabler for poverty reduction, and to boost national and regional growth.

In order to respond to the specific needs of these countries, a number of projects have been proposed in the areas of infrastructures, enabling environment and capacity building.

Projects summary table

5. Addressing Unique ICT Needs of Least Developed Countries, Small Island Developing States and Landlocked Developing Countries			
Code	Project Name	Source	Estimated Budget '000 USD
5.01	Low-cost computing devices and e-educational content for Schools	ITU	3,500,000
5.02	Catalyzing ICT use for digital development	ITU	5,300
5.03	"Connect a School; Connect a Community" in Lao P.D.R.	ITU	300
5.04	ITU International ICT Volunteers (IIVs)	ITU	4,000
5.05	Digital Inclusion for ALL	ITU	500
5.06	Connect School; Connect a Community for sustainable development in Myanmar	ITU	3,000
5.07	Developing a Regional Model for Electronic Cause of Death Integrated Reporting System (eCODIRS)	World Health Organization, Regional Office for South East Asia	34,000
5.08	Using Innovation, Technology and Media as Effective Tools in the Fight against the Illicit Trafficking of Cultural Property	UNESCO Bangkok	1,000
5.09	YouthMobile - Engaging young people to develop the next generation of mobile apps for sustainable development and job creation	UNESCO	2,000
5.10	"Connect a School; Connect a Community" & e-NABLE Projects in Sri Lanka	Telecommunications Regulatory Commission of Sri Lanka	3,000
5.11	Strengthening ICT and Telecom Sector in Bangladesh through Capacity Development of Stakeholders (STIB)	Association of Mobile Telecom Operators of Bangladesh (AMTOB)	2,336
5.12	Implementation of Bhutan CIRT	Ministry of Information & Communications	250
5.13	Application system to manage/maintain Community Centers	Ministry of Information and Communications (MoIC)	50
5.14	Empowering farmers through connecting to market through ICT (Internet and Mobile Phone)	Bangladesh Institute of ICT in Development (BIID)	365
5.15	Improving the collection of ICT statistics for development, in Asian LDCs and Pacific SIDS.	UNESCAP	1,200
5.16	"Connect School; Connect a Community" in Democratic Republic of NEPAL	Nepal Telecommunications Authority	50
5.17	Samoa Cyber Security	Ministry of Communications and IT - Samoa	50
5.18	Regional Distance Learning Centres for Solomon Islands National University (SINU)	Solomon Telekom	5,000
5.19	Harnessing and Preserving National Heritage and Ancient Cultural through ICTs	Ministry of Posts and Telecommunications(MPTC)Cambodia	500
Total			3,562,901

Project Title: Low-Cost Computing Devices and e-Educational Content for Schools

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The project aims at the use of ICT in education through introducing low-cost tablets for students/teachers in schools in pilot countries in Asia-Pacific. Several low-cost tablets are currently available in the market providing the potential to revolutionize the use of educational computing in schools. The use of low-cost, Open Source tablets make content development easier and facilitate the distribution of free and paid educational content.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

The project aims to foster the use of ICT in education through introducing low-cost tablets for students/teachers in schools in pilot countries of Asia-Pacific.

Expected Results

- Improved skills and more empowered students and teachers;
- More vibrant and sustainable ecosystem for educational Apps development resulting in better applications available for students and teachers;
- Better coverage and accessibility of ICT and knowledge for students through affordable devices and connectivity.

Estimated Start Date

January 2014

Estimated Duration

60 months

Estimated Budget

USD 3,500,000,000

Main Activities

- Set up Project Management Office and Steering Committee
- Identification and selection of the beneficiary countries
- Agreement with countries and identification of Focal Point
- Identification of adapted equipment and applications
- Evaluation of the requirements of each country
- Making arrangements to provide internet and electricity facility
- Installation of equipment in the identified schools
- Transfer of equipment ownership and arrangement of O&M
- Delivery of training course to school teachers

Project Title: **Catalyzing ICT Use for Digital Development**

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

ICTs are playing a critical role in powering innovation, increasing efficiency and enhancing environmental sustainability across industry sectors and communities. The pervasive character of ICT has made it a tool for day to day living. However, there still remain challenges such as language, lack of capacity and coordination that prevent individuals from harnessing its full potential.

ITU Members have accorded development of ICT applications customized to local needs and language as a priority area in Asia-Pacific region while promoting ICT applications to enrich lives.

As governments continue to deploy broadband in countries, it is important to enhance its uptake in rural and urban areas through strategic localization, smart partnerships and enhanced coordination at national and international level. This project aims to facilitate this objective.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- Up scaling existing ICT applications at national and international level and wherever necessary development of ICT applications that can support multilingualism and address local needs;
- enhanced skills in the area of ICT Applications development;
- improve digital literacy in identified areas.

Expected Results

- to develop a comprehensive regional guideline on approaches to enhance ICT applications use and digital literacy while assimilating existing toolkits, guidelines and resources of ITU, and other partners;
- to assist countries in identifying key bottlenecks to use of ICT applications, possible solutions and developing master plans and roadmaps for promoting ICT applications in the country for socio-economic development;
- to assist countries in evolving solutions to enhance digital literacy;
- to build human capacity building in these areas;
- to make available ICT applications that can support multilingualism and address local needs.

Estimated Start Date

January 2014

Estimated Duration

60 months

Estimated Budget

USD 5,300,000

Main Activities

Part 1: Developing regional framework

- Development of a guideline for Asia-Pacific region on approaches to enhance ICT applications use and digital literacy taking into account international best practices (top down and bottom up);
- Identification of five countries for assessment and identification of key challenges in promoting ICT applications use and digital literacy and preparing a master plan / guideline;
- Development of distance learning / self-paced capacity building modules.

Part 2: Supporting development of national implementation frameworks

- Kick off meeting of ICT stakeholders to discuss priority areas;
- Development of master plans, guidelines and detailed implementation mechanisms for five countries, which would be further expanded to include up to 20 countries;
- Multi stakeholder awareness and human capacity building in the areas of master plan implementation in all countries;
- Identifying key priority areas of the master plan that require implementation assistance as well as the respective national stakeholders in consultation with national governments;
- Identifying international and national partners based on local priority;
- Relevant ICT applications customized to local needs in more than 10 countries
- Organize regional workshops to share best practices and lessons learnt.

Part 3: Development of skill based training and digital literacy

- Development of ICT applications and skill based training depending on country readiness;
- Provide strategic assistance on implementation of the developed frameworks through in-country and online assistances over the project period and with a 6 months focus period;
- Conduct national stakeholder meetings to review project implementation and impact;
- Develop a project final report and publication.

Project Title: "Connect a School; Connect a Community" in Lao P.D.R.

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Connecting all villages, schools, hospitals, and public centers by year 2015' was the target specified under the World Summit on Information Society (WSIS) in 2003. While the target year is approaching, the majority of rural and disadvantaged people are still disconnected from the benefits of ICTs, remaining outside the Information Society. The high cost of infrastructure, complexities in service provision, and undiscovered demand for broadband services hamper a natural diffusion of broadband connectivity in rural and remote areas. Greater attention in providing connectivity to underserved people is necessary and urgent.

Acknowledging the significant challenges in rural connectivity and the importance of schools in communities, the ITU has launched a special initiative on 'Connect a School, Connect a Community'. The initiative aims to promote broadband internet connectivity in schools so that connected schools can serve as community ICT centers for rural, marginal urban, and isolated areas. A particular attention is also paid to providing broadband access to disadvantaged and vulnerable groups such as women, children, indigenous peoples and persons with disabilities. A similar project, following Public Private Peoples' Partnership (4P) Model was implemented in Sri Lanka recently by the ITU.

Given the importance of universal primary education, disparity of level of education amongst male and female population and large number of ethnic groups in several countries, including Lao PDR, this project will encompass provision of ICT facilities, including its installation and training on computer literacy and basic software to primary and secondary schools located in remote areas in Lao PDR. In order to select the participating schools, the level of ICT development in the area, availability of education resources, economic level of the community and community contribution for ICT development should be taken into consideration. It is expected to educate and to enhance access and use of ICT for school teachers, children, persons with special needs and persons in nearby communities. Also this project will benefit PWDs, especially children in terms of ICT and software development.

Beneficiary Country

Lao P.D.R.

Project Objective(s)

The Project is intended to:

- Benefit the school children and local community by providing equitable access to education using of ICT/ Broadband;
- Develop ICT Infrastructure that can deliver reliable ICT applications especially education including educational portals, interactive learning / sharing, distance learning;
- Teachers and community training;
- Encourage use of school as community centre after school hours;
- Develop applications such as e-agriculture, e- health, e-commerce, e-government; and
- Establish Public Private Peoples' Partnership Model.

Expected Results

- Reduced digital divide between rural and urban areas;
- Enhanced access and knowledge of education through ICT;
- Improved connectivity to the communities;
- Enhanced use of e- applications for efficiency and socio-economic development;
- Increased development of local contents and applications; and
- Strengthened 4P Model.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 300,000

Main Activities

- Preparation of Project Document
- Appointment of National Focal Point
- Identification and selection of the schools
- Evaluation of the requirements of each school (identification of the type of connectivity required, equipment to be purchased and etc.)

- Identification of equipment suppliers, procurement and delivery of the equipment (phase one)
- Identification of equipment suppliers, procurement and delivery of the equipment to PWDs (phase two)
- Exemption of customs, duties, taxes and other fees
- Making arrangements to provide electricity facility / wiring
- Making arrangements to provide Internet facility
- Installation and commissioning of equipment in the identified schools
- Transfer of equipment ownership and arrangement of O&M
- Delivery of training course material to school teachers
- Official inauguration of the project

Project Title: ITU International ICT Volunteers (IIVs)

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

The International Telecommunication Union (ITU) and the National Information Society Agency (NIA), Republic of Korea have jointly implemented an ICT volunteer programme since 2011. Since then, more than 200 volunteers were dispatched to various countries of the Asia-Pacific region with supports from governments, local authorities, and communities in the countries. The programme was also supported by the Australian Government through the Department of Broadband, Communications, and the Digital Economy (DBCDE).

At the Asia-Pacific Regional Preparatory Meeting (RPM) for the World Telecommunication Development Conference (WTDC) held in Cambodia from 30 April – 2 May 2013, a proposal led by the Ministry of Communication and Information Technology of Indonesia (MCIT) was tabled requesting ITU/BDT to promote and establish a framework for international volunteers in the region. The proposal was supported by the meeting and was included into common proposals from the region to the WTDC.

In addition, Thailand through the National Broadcasting and Telecommunications Commission (NBTC) has also supported the ITU volunteer programme and proposed to continue hosting ITU international volunteers as well as to establish a network of local volunteers in the country with the ITU.

With this connection, this proposal aims to launch a new initiative for wider “ITU International ICT Volunteers (IIV)”. The initiative will establish a platform for multiple stakeholders and partners to promote and dispatch volunteers within their countries and to overseas. Through the volunteers, the initiative will harness the potentials of information and communication technologies (ICTs) in fostering socio-economic development. The IIV initiative will act as an underlying framework for multi-partnerships either bi-lateral or multi-lateral cooperation among countries and organisations.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- Establish and promote a network of international ICT volunteers, as well as create a platform and framework for cooperation between networks of volunteers at all levels;
- Guide and assist governments in setting up a local/national network of volunteers;

- Provide opportunities for volunteers including youth, women and girls, retired professionals to gain and share knowledge and hands-on experience with other people at various levels and especially within the UN system;
- Promote broadband and the use of ICT for sustainable development especially in rural/remote communities, as well as promote cultural exchange and creative economy;
- Create shared values (CSV) especially with private sector and academic institutions for their participation that will bring space for innovation, expertise, quality in accomplishing a true public private people partnership;
- Strengthen and enhance international cooperation especially among the Members, international organizations, governments, the industry, and civil society.

Expected Results

- Framework for Cooperation on International ICT Volunteers including guidelines for setting up a network of volunteers;
- International and national networks of volunteers;
- Web portal of volunteers and web repository of ICT resources including shared ICT applications and contents;
- Strengthened regional and international cooperation among Member States and international organizations;
- Promoted uptake of ICTs especially in rural communities and among marginalized groups of people.

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 4,000,000

Main Activities

- 1) Develop guidelines, tools, and web portal for facilitating cooperation and partnerships
- 2) Conduct demand survey
- 3) Promote and call for applications

- 4) Recruit volunteers
- 5) Orientation meeting
- 6) Dispatching the volunteers
- 7) Evaluation meeting
- 8) Develop annual report of the initiative

Project Title: Digital Inclusion for ALL

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Digital inclusion is fundamental to building inclusive societies. It means that all people including persons with disabilities, women, girls, youth or children must have affordable access to information and communication technologies (ICT) for their social and economic development.

Policy-makers should continue efforts to bridge the digital and knowledge divides between developed and developing countries by promoting international collaboration and partnerships.

The telecommunication industry has a responsibility to continue to invest in order to extend coverage and bandwidth to close the connectivity gap.

The potential for public-private partnership, as well as partnership with the academic world is huge, especially in providing local content and access to education.

The objective will highlight on policies to promote ICT access and adoption; creating an enabling environment, spectrum management in the digital economy; universal access strategies; policies for new and converged services, applications and content; ICT and cross-sectorial matters.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

To enhance Policy-makers efforts to bridge the digital and knowledge divides within the framework of national e-strategies, e-government, e-education, and e-business as follow:

- Promote the availability of infrastructure and foster an enabling environment for telecommunication/ICT infrastructure development and for its use in a safe and secure manner;
- Assist developing countries to bridge the digital divide and achieve greater telecommunication/ICT-enabled socioeconomic development;
- Expand the benefits of the information society to the membership in cooperation with public and private stakeholders, and promote the integration of the use of telecommunication/ICT into the broader economy as a driver of development, innovation, well-being, growth and productivity globally;
- Set up and/or leverage Community technology programs, including those providing community labs (such as Community Technology Centers/Telecenters) are Digital Inclusion programs access technology, build skills and make beneficial use of digital content.

Expected Results

The way to close the digital divide is to build a virtuous circle of completion and investment. Private-sector efforts to provide connectivity need to be complemented by public policies and regulatory frameworks that favor investment, and public-sector support for initiatives such as telecenters and rural connectivity where the market alone cannot solve the problem.

Offering value through connectivity is what generates demand, and the supply of value over connectivity has a lot to do with content and applications that the public sector generates, specifically for education, health, and relations between the citizen and the States, within the framework of national e-strategies e.g.:

- e-government, aims to increase the effectiveness of government services by making them available electronically to citizens and businesses at all times. The goal is to integrate government e-services so that they can be provided seamlessly, easily and safely over the Internet.
- e-education, People remain the core of development, and their skills on ICT is the key to turning into a digital society with an aim to bridge the digital divide and enable citizens to be actively involved in the affairs of their own communities such as Telecenters which have proven to be a great success in promoting ICT as a cornerstone to empowering citizens and bridging the digital literacy divide.
- e-business, aims to create a business ecosystem that will help to develop these enterprises into globally competitive ICT businesses in which small-and medium-sized enterprises have been recognized as key players in economic development, in particular, in the ICT sector.

Estimated Start Date

March 2014

Estimated Duration

18 months

Estimated Budget

USD 500,000

Main Activities

- Multi-stakeholders/partners (kick-off) meeting. The meeting will formally launch the project and formalize the full commitment and participation of all stakeholders/partners.
- Assessment of the situation and development and validation of the recommendation.
- Implementation based on the recommendation.
- Capacity building to equip them with necessary tools and skills for long-term sustainability and succession in the project.

Project Title: Connect School; Connect a Community for Sustainable Development in Myanmar

Source of Proposal: ITU

Contact: Cosmas Zavazava - ITU - cosmas.zavazava@itu.int

Brief Description

Connecting all villages, schools, hospitals, and public centers by year 2015' was the target specified under the World Summit on Information Society (WSIS) in 2003. While the target year is approaching, the majority of rural and disadvantaged people are still disconnected from the benefits of ICTs, remaining outside the Information Society. The high cost of infrastructure, complexities in service provision, and undiscovered demand for broadband services hamper a natural diffusion of broadband connectivity in rural and remote areas. Greater attention in providing connectivity to underserved people is necessary and urgent.

Acknowledging the significant challenges in rural connectivity and the importance of schools in communities, the ITU has launched a special initiative on 'Connect a School, Connect a Community'. The initiative aims to promote broadband internet connectivity in schools so that connected schools can serve as community ICT centers for rural, marginal urban, and isolated areas. A particular attention is also paid to providing broadband access to disadvantaged and vulnerable groups such as women, children, indigenous peoples and persons with disabilities. A similar project, following Public Private Peoples' Partnership (4P) Model was implemented in Sri Lanka recently by the ITU.

Given the importance of universal primary education, disparity of level of education amongst male and female population and large number of ethnic groups in several countries, including Myanmar, this project will encompass provision of ICT facilities, including its installation and training on computer literacy and basic software to primary and secondary schools located in remote areas in Myanmar. In order to select the participating schools, the level of ICT development in the area, availability of education resources, economic level of the community and community contribution for ICT development should be taken into consideration. It is expected to educate and to enhance access and use of ICT for school teachers, children, persons with special needs and persons in nearby communities. Also this project will benefit PWDs, especially children in terms of ICT and software development.

Beneficiary Country

Myanmar

Project Objective(s)

- Benefit the school children and local community by providing equitable access to education using of ICT/ Broadband;

- Develop ICT Infrastructure that can deliver reliable ICT applications especially education including educational portals, interactive learning / sharing, distance learning;
- Teachers and community training;
- Encourage use of school as community center after school hours;
- Develop applications such as e-agriculture, e- health, e-commerce, e- government; and
- Establish Public Private Peoples' Partnership Model.

Expected Results

- Reduced digital divide between rural and urban areas;
- Enhanced access and knowledge of education through ICT;
- Improved connectivity to the communities;
- Enhanced use of e- applications for efficiency and socio-economic development;
- Increased development of local contents and applications; and
- Strengthened 4P Model.

Estimated Start Date

January 2014

Estimated Duration

18 months

Estimated Budget

USD 3,000,000

Main Activities

1. Preparation of Project Document;
2. Appointment of National Focal Point;
3. Identification and selection of the schools;
4. Evaluation of the requirements of each school;
5. Short list of equipment suppliers, procurement and delivery of the equipment (P1);
6. Short list of equipment suppliers, procurement and delivery of the equipment to PWDs (P2);
7. Exemption of customs, duties, taxes and other fees;

8. Making arrangements to provide electricity facility / wiring;
9. Making arrangements to provide Internet facility;
10. Installation and commissioning of equipment in the identified schools;
11. Transfer of equipment ownership and arrangement of O&M;
12. Delivery of training course material to school teachers;
13. Official inauguration of the project.

Project Title: **Developing a Regional Model for Electronic Cause of Death Integrated Reporting System (eCODIRS)**

Source of Proposal: World Health Organization, Regional Office for South East Asia

Contact: Jyotsna Chikersal - World Health Organization, Regional Office for South East Asia - chikersalj@who.int

Brief Description

Health Agenda- Why Civil Registration Systems Matter?

"To make people count, we first need to be able to count people" (LEE Jong-Wook, WHO Director-General, 2003–2006, address to WHO staff July 21, 2003). Most people in Asia are born and die without leaving a trace in any legal record or official statistic. Absence of reliable data for births, deaths, and causes of death (COD) are at the root of a scandal of invisibility, which renders most of the world's poor as unseen, uncountable, and hence uncounted. Most fundamentally of all, civil registration is a proof that a state recognizes and respects the lives of those it has a responsibility to defend and develop.

Civil registration and the resulting vital statistics are essential public goods that benefit individuals and societies. Legal documents that prove identity and citizenship not only provide access to state services or entitlements, but can also be a defense against statelessness and exploitation. When vital statistics of births and deaths are combined with accurate cause of death data, they allow health decision-makers to make more targeted interventions and help save lives. Proper mortality statistics would help produce more health for money.

In May 2012 in the Lancet, an international research group published that an estimated that 7.6 million children under age 5 died in 2010, well over half from infectious diseases. But fewer than 3% of those deaths were medically certified- assigned a cause by a health worker and recorded in an official database. For the other 97%, the scientists are forced to make sophisticated guesses." (Science, June 2012.)

Sense of Urgency- Are we Shooting in the Dark!

Every minute, at least one woman dies from complications related to pregnancy or childbirth, every dying woman has a story to tell, and using Verbal Autopsy techniques would allow us to get it. Globally 1 in 3 births are not counted, 2 in 3 deaths are not counted and 2/3rd of the world's population does not have reliable cause of death. So we are dealing with less reliable health indicators. Without these data we have no reliable way of knowing whether our interventions are working, and whether development aid is producing the desired health outcomes (Dry Margaret Chan, Director-General, World Health Organization, 12 November 2007)

We need to prioritize CRVS as a development issue on the global post-MDG agenda. We cannot wait any longer. The recent global focus on aid effectiveness and outcomes will remain more rhetoric without functional CRVS systems.

Evidence Base for our Project

Since end 2010, with technical support from WHO-SEARO in collaboration with UNESCAP, using a robust tool developed by WHO and University of Queensland Comprehensive Assessment of CRVS systems have been completed or are going to be completed in 10 of the 11 SEAR countries and strategic plans for improvement are being developed. Across all SEAR countries COD certification practices need strengthening, even in countries with high completeness of death registration, 40-50% of COD's are still ill defined.

There is an urgent need to adopt innovative means to obtain better mortality data from CRVS systems, and investment in these approaches is essential to make exponential improvements in CRVS systems over the next 3-5 year period. Mortality data from CRVS systems is most sustainable and cost-effective in the long run. To make significant strides in strengthening the CRVS system as a whole, there is need for aligned and sustainable support by development partners.

Building Partnerships and Call for Collaboration on eCODIRS

Delivering health care for all in the age of information society can only be possible through cooperation and partnership between the technology and healthcare sectors. ITU and World Health Organization WHO have recognized the need for synergy of health with ICT and accordingly have taken a number of global initiatives.

In view of these strategic drivers, WHO-SEARO has developed a concept note on an Electronic Cause of Death Integrated Reporting System (eCODIRS), this would support achieving better coverage and completeness of the birth and death registration component of Civil registration while improving the Vital Statistics with Nationally representative COD sampling through Sampling Registration System (SRS). The rationale behind the eCODIRS is to mobilize community health workers to conduct verbal autopsies for all deaths, and triangulate this with COD data from health facilities and police data (for unnatural deaths) wherever available.

The eCODIRS concept, described in detailed in the concept paper has been developed based on several country visits, discussions with government officials, comprehensive assessments of CRVS systems in the SEAR, and consultations with technical experts in the field.

The eCODIRS concept is:

1. Based on linkages between the Key Stakeholders of CRVS and would have multi-sectorial impact in strengthening all aspects of CRVS system
2. It makes the use of ICT as an enabler for community mobilization and use of Community Health Workers for collection of quality COD data for all deaths using Verbal Autopsy techniques
3. It is building on existing experience, previous pilots and based on several country visits, Comprehensive Assessments of CRVS, and consultations with country experts
4. It is practical and designed keeping in mind existing infrastructure in the SEAR countries
5. It is based on a standards approach, and a stable and robust methodology

Based on the lessons learnt from the piloting of eCODIRS, a Regional Strategy for Strengthening Mortality Statistics from routine CRVS would be developed.

The concept paper on eCODIRS is another opportunity for fruitful collaboration between WHO and ITU, by making use of ICT to deliver improved health outcomes, and support Universal Health Coverage by strengthening CRVS systems so they are able to reach the unreached communities to capture disaggregated information on these communities to improve their access to health facilities and health programs.

The eCODIRS would make use of already established and widely used open-source software for data aggregation and analysis that is DHIS, and individual records Electronic Medical record system that is OpenMRS. Automated tools like InterVA for COD from Verbal Autopsy and IRIS for ICD coding of COD would also be integrated in eCODIRS, and it would be based on a systems approach using interoperability and data standards. The eCODIRS would only entail building a thin application layer on top for cause of death data, birth and death reporting, analytics for vital statistics and data quality, M&E, and linkage to CRVS for de-duplication and gap filling.

Beneficiary Countries

Bangladesh
Bhutan
Dem. People's Rep. of Korea
India
Indonesia
Maldives
Myanmar
Nepal (Republic of)
Sri Lanka
Timor-Leste

Project Objective(s)

1. Improving the quality and completeness of cause-of-death data:
 - a. For all deaths (including community deaths): capturing the most probable COD using Verbal Autopsy (VA) at the deceased person's home. Linked to the VA conducted by the Maternal and Neonatal Tetanus elimination Program.
 - b. For health facility deaths: medically certified COD using the International Death Certificate, to be triangulated with COD data from VA.
 - c. For unnatural deaths: incorporation of police data on the COD, to be triangulated with COD data from VA.
2. MDSR: Reporting of maternal deaths occurring both in the community and health facilities to the MDSR system within 24 hours.
3. Birth Reporting: Reporting of births to the system by health facilities and FCHVs/CHWs/ANMs. Linkage with the immunization program to increase immunization coverage.

4. Reaching the unreached and supporting Universal Health Coverage: Establishing a campaign to reach out to unreached, marginalized and under-served communities to capture disaggregated information on these communities to improve their access to health facilities and health programs. This would support the goal of Universal Health Coverage is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them.
5. Data Quality Assessment and Vital Statistics: Conducting regular quality audits to improve data quality and analysis and compilation of vital statistics. Information Collected on health facility deaths & unnatural deaths triangulated with COD from VA done at deceased persons' home.
6. Linkage with the Civil Registration system to filter out duplication and fill the gaps in the Civil Registration system and vice versa.

Expected Results

In collaboration with the Ministry of Health, Ministries where the Civil Registration Office and National Statistics Office, reside respectively, to facilitate delivery of the following:

1. A Regional Strategy developed for improving mortality statistics in the SEAR countries, using routine civil registration systems
2. Better quality mortality statistics, based on nationally representative COD data for deaths occurring in health facilities and in the community.
3. Overall CRVS system strengthening in SEAR countries, focusing on all 5 components, with better coverage of birth and death registration to result in improved efficiency and accountability of social and economic services, and provide registered individuals better access to socio-economic benefits
4. Strengthening Universal Health Coverage and Reaching the Unreached by capturing disaggregated information on previously unreached communities, and improving their access to health facilities and health programs.
5. Overall ICT infrastructure strengthening in SEAR to support CRVS, Health Information Systems and Hospital Information Systems.

Estimated Start Date

January 2014

Estimated Duration

48 months

Estimated Budget

USD 34,000,000

Main Activities

Implementation Strategy

The 11 SEAR countries have been divided into 4 clusters (Annex 1 of eCODIRS concept paper), depending on existing infrastructure and applicability of similar strategies for improving mortality statistics. The detailed budget components have been developed for Nepal and Bangladesh.

Countries with large populations such as India and Indonesia have to implement large sample registration systems, sample sizes, need for stratification of the sample, and distribution of sample units will be planned based on specific country context.

At the other end of the spectrum, for countries with small populations such as Timor-Leste where there is a potential for complete coverage within a short period and these components will be adopted as required, at the national level, with complete coverage of the full population.

The eCODIRS would be piloted in Nepal and Bangladesh to begin with and later extended to other SEAR countries listed as beneficiary countries. For Nepal and Bangladesh, the approach would initially focus on sample registration systems with robust cause of death ascertainment to measure mortality at state/province level. Data from the Sample Registration system (SRS) would allow for an interim quick-win solution to generation of better quality mortality statistics, and this would be linked to the CRVS database. Alongside the SRS approach, in both Nepal and Bangladesh, linkages to CRVS data would be established and this would support strengthening of the birth and death registration component of CRVS systems.

The following 10 Components of eCODIRS need to be implemented, and community mobilization and capacity building would be core cross-cutting implementation strategy:

1. Mobilize Community Health workers for Death Reporting of all deaths
 - Verbal Autopsy Data collection methods (Mobile Phone / devices, Fill and forward paper VA for data entry, Call center approach)
2. Medically Certified Cause-of-Death (MCCD) for Hospital Deaths, to be triangulated with COD from VA
3. Incorporation of Police data for unnatural Deaths, to be triangulated with COD from VA
4. Within 24 hrs. Reporting of Maternal Deaths to MDSR, to be validated with COD from VA
5. Birth Reporting by CHWs to the Central Unit
6. Establish a Cause of death Central Unit (call center+ Centralized database and application)
7. Coding of COD data
 - IRIS Coding of COD for Health Facility Deaths
 - INTER VA for coding COD from Verbal Autopsy for all Deaths
8. Regular data Quality Assessment and Compilation of VS. Triangulation of COD data from MCCD and police data with COD from VA data

9. Linkage with CRS to filter duplication and fill the gaps in CRS
10. Campaign to reach-out to marginalized communities. The application of VA techniques and data collection methods will be done either on Nationally Representative Sample or Complete Coverage of the Full population, based on the size of the population and the cluster to which the countries belong. Accordingly the components described below will be implemented either to a sample or full population based on the country context.

The detailed concept note, and budget for Nepal, Bangladesh and Regional support component are attached for your consideration.

Project Title: Using Innovation, Technology and Media as Effective Tools in the Fight Against the Illicit Trafficking of Cultural Property

Source of Proposal: UNESCO Bangkok

Contact: Julia Davies - UNESCO - j.davies@unesco.org

Brief Description

The illicit import, export and transfer of ownership of cultural property pose a serious threat and damage for the cultural heritage of humankind.

UNESCO is leading the fight in the illicit trafficking of cultural property. UNESCO's Member States have recently highlighted the urgency and the need to address this issue and to prioritize this. The project aims to strengthen capacity for key source countries in the Asia-Pacific region whose cultural property is seriously threatened. Preventative measures include the protection of collections and the promotion of professional ethics.

Beneficiary Countries

Asia-Pacific countries

Project Objective(s)

- 1) Online Object ID System – Inventories and databases.
 - UNESCO will assist countries, in particular museums, for the identification and registration of their cultural property to be widely accessible through digital inventories and databases.
 - Using technology to create a sophisticated inventory system making it more difficult to illicitly export and transport cultural property.
 - To assist in the training of the Object-ID registration system, an e-tutorial will be developed to facilitate its roll-out and distribution to optimize the number of users able to manage the input of data effectively.
- 2) Educational and awareness raising campaigns – Harnessing media applications to spread the message about ethical standards for the safeguarding of cultural property.
 - Public awareness and educational campaigns are an effective and valuable tool used both in source countries and throughout the international route of illicit trafficking.
 - Produce a documentary film on the fight against the illicit trafficking of cultural property in the Asia-Pacific region to educate the public, from local communities to art dealers- about the negative impact caused by looting.

- Short educational video clips on the importance of safeguarding cultural heritage can be played at airports, World Heritage sites and during flights to particular key market countries in Asia-Pacific such as Hong Kong and Singapore, and also during flights to key source countries.

Expected Results

- To create national digital Object-ID system databases and inventories and training of museum staff through e-tutorials;
- Awareness raising campaigns through educational films and videos on the importance of safeguarding cultural property;
- Successful international partnerships created between: Government officials (Ministries of Culture, Tourism etc.), International Council of Museums (ICOM), UNESCO, INTERPOL, UNIDROIT, police and customs officials, museum managers, curators and archaeologists.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 1,000,000

Main Activities

1. Undertake a baseline study of beneficiary countries (situational analysis);
2. Analyze requirements of beneficiary country based on the outcome of the baseline study;
3. Develop a digital national database system for national and private collections to be documented for identification purposes;
4. Training for targeted staff to use the database, preferably an e-tutorial for mass training (train the trainers could be an alternative method used);
5. Develop a media campaign;
6. Roll-out media campaign;
7. Analyze effectiveness of project 12 months after project completion.

Project Title: Youth Mobile - Engaging Young People to Develop the Next Generation of Mobile Apps for Sustainable Development and Job Creation

Source of Proposal: UNESCO

Contact: Abel CAINE - UNESCO - a.caine@unesco.org

Brief Description

YouthMobile is a new UNESCO Initiative which aims to directly engage young people to develop the next generation of mobile apps for sustainable development, and job creation.

With particular attention to young women, the Initiative allows young developers to acquire the high-level skills and confidence to develop, promote, and sell locally relevant mobile apps that solve local issues of sustainable development and provide employment.

Beneficiary Countries

Bhutan
India
Nepal (Republic of)
Samoa
Solomon Islands
Thailand

Project Objective(s)

The medium-term objectives of the YouthMobile Initiative are to:

1. Increase awareness by youth of all issues of sustainable development through mobile apps;
2. Enhance opportunities for job creation for youth.

The YouthMobile Initiative builds on the experience of many worldwide initiatives that introduce young people to computer science programming (learning-to-code) and problem solving (coding-to-learn). It also seeks to build on experiences targeting young women who are vastly underrepresented in this field. Finally it builds on the consideration that for millions of young people, the smartphone in their pocket is a very powerful computer, it will be their only computer, and they use it for nearly every aspect of their lives: communicating, learning, taking pictures, and playing games.

Expected Results

The primary Target Stakeholders, expected results and outcomes are:

1. Youth – from 18 – 27 years old, delivering 21st century skills and digital literacy with the stated intention of developing apps for promotion and sale for livelihoods;

2. Secondary school students - from 13 – 18 years old, tapping into the full energy and natural familiarity of young students with mobile technology to acquire programming skills to develop fun apps (learning to code) and expand all-round skills (coding to learn).

UNESCO will also deliberately target disadvantaged youth and secondary school students especially those with disabilities, living in rural areas, and minorities.

This project wants to tell these young people that such computing power can be used for directly addressing their personal challenges or the problems faced by their local communities. The project will also emphasize that programming mobile apps can be fun; requiring different kinds of skills and idea, sharing code, making friends, and seeing the impact of your App. Eventually groups of young people can create a business or demonstrate skills for applying to IT jobs in the local, national or international market.

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 2,000,000

Main Activities

UNESCO will develop and extensively promote very high-quality, multi-lingual, comprehensive training materials for developing mobile apps, and work with ICT-enabled youth organizations and secondary schools to create a very large pool of skilled and confident mobile app developers.

The training materials will be openly-licensed allowing for adaptations including translation, localization, and innovations.

UNESCO will also create the 1st Global List of Mobile App Competitions for the now-skilled developers to submit apps to earn prizes, recognition, and possibly employment.

UNESCO will develop a new Mobile App Competition to take advantage of our very large education datasets to encourage the development of apps by the YouthMobile learners that show new insights into education, encourage its partners as well as sister UN organizations to develop Mobile App competitions with an emphasis on apps for sustainable development.

Project Title: “Connect a School; Connect a Community” & e-NABLE Projects in Sri Lanka

Source of Proposal: Telecommunications Regulatory Commission of Sri Lanka Sri Lanka

Contact: Mohan Jayasekera - Telecommunications Regulatory Commission of Sri Lanka - mohan@trc.gov.lk

Brief Description

Connecting all villages, schools, hospitals, and public centers by year 2015 was the target specified under the World Summit on Information Society (WSIS) in 2003. While the target year is approaching, the majority of rural and disadvantaged people are still disconnected from the benefits of ICTs, remaining outside the Information Society. The high cost of infrastructure, complexities in service provision, and undiscovered demand for broadband services hamper a natural diffusion of broadband connectivity in rural and remote areas. Greater attention in providing connectivity to underserved people is necessary and urgent.

Acknowledging the significant challenges in rural connectivity and the importance of schools in communities, the ITU has launched a special initiative on ‘Connect a School; Connect a Community’. The initiative aims to promote broadband internet connectivity in schools so that connected schools can serve as community ICT centers for rural, marginal urban, and isolated areas. A particular attention is also paid to providing broadband access to disadvantaged and vulnerable groups such as women, children, indigenous peoples and persons with disabilities. A similar project, following Public Private Peoples’ Partnership (4P) Model was implemented in Sri Lanka recently by the ITU.

Given the importance of universal primary education, disparity of level of education amongst male and female population and large number of ethnic groups in several countries, this project will encompass provision of ICT facilities, including its installation and training on computer literacy and basic software to primary and secondary schools located in remote areas. In order to select the participating schools, the level of ICT development in the area, availability of education resources, economic level of the community and community contribution for ICT development should be taken into consideration. It is expected to educate and to enhance access and use of ICT for school teachers, children, persons with special needs and persons in nearby communities. Also this project will benefit PWDs, especially children in terms of ICT and software development.

Sri Lanka wishes to share experiences and enhance the ICT facilities and connect the schools and PwD communities also by organizing a workshop and to portray the success stories from the beneficiary schools and also to include learning journeys.

This project will provide ICT facilities to 250 rural schools and 50 centers for persons with special needs special schools/ VTCs/University Special Need Resource Centers. The success of this project will be evaluated by organizing a competition amongst the project schools.

Beneficiary Country

Sri Lanka

Project Objective(s)

The Project is intended to:

- Enhance ICTs through Connect a schools Connect a PwD Community;
- Evaluate the impact /success of projects in Sri Lanka;
- Connect a School; Connect a Community projects;
- e-NABLE projects;
- Benefit the school children and local community by providing equitable access to education using of ICT/ Broadband;
- Develop ICT Infrastructure that can deliver reliable ICT applications especially education including educational portals, interactive learning / sharing, distance learning;
- Teachers and community training;
- Encourage use of school as community centre after school hours;
- Develop applications such as e-agriculture, e- health, e-commerce, e-government; and
- Establish Public Private Peoples' Partnership Model.

Expected Results

- Reduced digital divide between rural and urban areas;
- Enhanced access and knowledge of education through ICT;
- Improved connectivity to the communities;
- Enhanced use of e- applications for efficiency and socio-economic development;
- Increased development of local contents and applications;
- Strengthened 4P Model;
- Outcomes of the 4P project model in Sri Lanka.

Estimated Start Date

January 2014

Estimated Duration

18 months

Estimated Budget

USD 3,000,000

Main Activities

ITEM 1

- 1 Preparation of Project Document;
- 2 Appointment of National Focal Point (Jan 2014);
- 3 Identification and selection of the rural schools & PwD special school (Mar 2014);
- 4 Evaluation of the requirements of each school (identification of the type of connectivity required, equipment to be purchased)(May 2014);
- 5 Identification of equipment suppliers, procurement and delivery of the equipment (phase one) (Jun 2014);
- 6 Identification of equipment suppliers, procurement and delivery of the equipment to PWDs (phase two) (Jul 2014);
- 7 Exemption of customs, duties, taxes and other fees (Aug 2014);
- 8 Making arrangements to provide electricity facility / wiring (Sep 2014);
- 9 Making arrangements to collect information to provide Internet facility ; feasibility study of the selected schools; decide suitable Internet connectivity for the school; October 2014
- 10 Installation and commissioning of equipment in the identified schools (Dec 2014);
- 11 Transfer of equipment ownership and arrangement of O&M (Jan 2015);
- 12 Delivery of training course material to school teachers (Feb 2015);
- 13 Making arrange concessionary rate package internet connectivity for the school (Feb 2015);
- 14 Official inauguration of the project (Feb 2015).

ITEM 2

- 1 Conference (Mar 2014);
- 2 Competition Round One (Mar-Aug 2014);
- 3 Competition Second Round (Sep-Nov 2014);
- 4 Competition Third Round (Dec-Jan 2014);
- 5 Final Competition (Feb-Mar 2014);
- 6 Distribution of awards/certificates (Mar 2014).

Project Title: **Strengthening ICT and Telecom Sector in Bangladesh Through Capacity Development of Stakeholders (STIB)**

Source of Proposal: Association of Mobile Telecom Operators of Bangladesh (AMTOB) Bangladesh

Contact: T.I.M. Knurl Kabir - Association of Mobile Telecom Operators of Bangladesh (AMTOB) - nurul.kabir@amtob.org.bd

Brief Description

The aim of the project is to strengthen the ICT and Telecom sectors of Bangladesh through institutional capacity development of the stakeholders involved so that the country's telecom growth can be sustained. The major stakeholders for whom the capacity development activities will be targeted are MoPT, MoICT, BTRC, AMTOB, and through AMTOB its member Mobile Network Operators (MNOs). The main focus of project activities will be to strengthen the institutional capacities of the policymakers and regulators. However, as the apex industry body, AMTOB plays a vital role to coordinate among various stakeholders and as such developing capacity of AMTOB is an important task that needs to be undertaken within this project. After capacity building, AMTOB will be able to provide better assistance to the ICT and telecom sectors for sustainable business growth.

The activities of the planned project will contribute to enhance the policy and regulatory framework of the mobile industry. Furthermore awareness building functions will target necessary policy reforms for relevant policies like NTP, Broadband, ICT etc., integrated policy approach such as Telecom and Financial services, Telecom and Education, Telecom and e-Governance, legislative reforms in case of sector specific laws like Telecom, ICT, Information/Media, Copyright, Patent etc. and new legislations wherever there is a gap. The interventions of the project will contribute to achieving sustainability for the MNOs so that they can continue to provide efficient and affordable services to the population.

Beneficiary Country

Bangladesh

Project Objective(s)

The main objective of the project is to strengthen the ICT and Telecom sectors of Bangladesh through the institutional capacity development of stakeholders involved so that the country's ICT and telecom growth can be sustained. The project plans to steer the industry towards sustainable growth also with following objectives:

- To develop human resources, enhance and upgrade communication facilities and achieve institutional strengthening of MoPT, MoICT, and BTRC, for a conducive policy and regulatory framework by identifying and overcoming the barriers affecting the growth of the ICT sector.

- To strengthen AMTOB by establishing an Innovation & Knowledge Center within the organization to encourage dissemination of information, with the facility functioning as an information hub for stakeholders (which include Government, Industry, Media, Academia, Law Enforcement Agencies and Civil Society).
- To create greater awareness on issues concerning the ICT and mobile telecom sectors and sensitize stakeholders including related Government agencies such as NBR, Law Enforcement Agencies etc., Media, Academia and Civil Society on the need and importance of policy reform and implementation.

Expected Results

- MoPT will be better able to provide policy support and regulatory guidance to steer the growth of ICT and Telecom sectors in the country, while addressing critical problems currently affecting the industry.
- MoICT will be able to work in unison with MoPT and other relevant bodies and stakeholders to support and sustain the growth of ICT and telecom sector.
- BTRC will be able to streamline and ease the regulatory regime and introduce a predictable regulatory framework. BTRC will be able to enhance its effectiveness by organizing regular stakeholder consultation before taking decision on any major issue that may impact the industry.
- Institutional strengthening of AMTOB will be achieved by establishing an Innovation & Knowledge Center within the organization to encourage dissemination of information. The facility will function as an information hub for the stakeholders (which include Government, Industry, Media, Academia, Law Enforcement Agencies and Civil Society). Research and Training related activities will start generating revenues which will ensure sustainability of the Center. MoPT, MoICT and BTRC will have access (including online access) to the Innovation & Knowledge Center and will take an active part in dissemination of information.
- A greater awareness on problems concerning the ICT and mobile telecom sectors and sensitization of stakeholders on the need and importance of policy reform and implementation will be achieved.

Estimated Start Date

January 2014

Estimated Duration

36 months

Estimated Budget

USD 2,336,000

Main Activities

- Establishment of a project governance structure;
- Recruitment of project manager and staff and identification of focal persons for each partner;
- Identification of resource requirements to be mobilized under the project;
- Identification and contracting of companies and consultants;
- Purchase and installation of equipment (hardware and software);
- Setting up and installation of the AMTOB Innovation & Knowledge Center.
- Assessment of the partner organizations MoPT, MoICT, and BTRC in relation to policy and regulatory affairs and operating procedures for mobile telecom industry;
- Formulating recommendations for capacity development of MoPT, MoICT, and BTRC and assist in implementing the same.
- Conducting stakeholder consultation and public private dialogues;
- Conducting coordination meetings among project partners;
- Study tours in two batches for 30 persons to two Asia-Pacific countries;
- Organizing awareness building initiatives including workshops and seminars;
- Monitoring and evaluation of project implementation;
- Project closure.

Project Title: Implementation of Bhutan CIRT

Source of Proposal: Ministry of Information & Communications, Bhutan

Contact: Orji Wangmo Policy & Planning Division - dwangmo@moic.gov.bt

Brief Description

The Royal Government of Bhutan has prioritized ICT development with the vision of building an ICT-enabled knowledge society, interpreted as an “intelligent society that learns to learn”.

The Ministry of Information & Communications (MoIC), which helms the promotion of ICT in Bhutan, is also cautious of the need to ensure a safe environment to harness the full potential of ICT benefits. The Ministry is aware that the security threat on critical information infrastructure and online services could deter the usage and proliferation of ICT services. With the increase of government services being delivered online, a surge in online banking services and an overall improvement in the penetration of internet services in Bhutan (actual internet subscribers 18.5%), the creation of CIRT has become a necessity for the future development of this sector. In June 2010, local ISP Druknet had around 50 of its websites hacked. Therefore, there is a growing need to be able to communicate, coordinate, analyze, and respond to cyber-attacks across different business sectors and national borders.

Collaboration at the national and international level is necessary to effectively align capabilities and expertise to manage incidents and raise awareness of potential incidents and steps toward remediation. Acknowledging the significant challenges that developing countries like Bhutan face, the ITU as part of the 2010 World Telecommunication Development Conference (WTDC-10), assisted Bhutan with the readiness assessment and capacity building on CIRT. ITU is currently exploring specialized technical assistance for establishing Bhutan CIRT which will operate in connection with the network of CIRTs, established by the International Multilateral Partnership Against Cyber-Threats (IMPACT). The Ministry has also approached World Bank for financial assistance in implementing the project.

Beneficiary Country

Bhutan

Project Objective(s)

To set up a fully operational national CIRT within the Department of IT & Telecom, Ministry of Information & Communications to coordinate information flow, respond to/manage cyber threats and enhance cyber security in the country.

Expected Results

- a) Continuity of services even in times of crisis
- b) Protection of essential services and critical national infrastructure
- c) Improve resistance to disruption
- d) Contain contagion
- e) Restore control of information dissemination
- f) Speed up recovery period to a state of normality
- g) Identify trends and vectors of cyber-attacks, and
- h) Train personnel as responders

Expected outcome:

- a) Improved cyber security environment and empower people to achieve their full potential
- b) Strengthened good governance
- c) Achieve sustainable socio-economic development

Estimated Start Date

December 2013

Estimated Duration

8 months

Estimated Budget

USD 250,000

Main Activities

A project team led by the Department of IT & Telecom (DITT), MoIC will be established. The project team will carry out a study on CIRT policies and regulatory framework, adoption of technology and systems, in addition to systems efficacy determination and capacity development.

The project team will carry out the following activities and the international consultants will support the project team during the process. They will also conduct training workshops for officers and staff from DITT/MoIC and other relevant government agencies.

- 1 Create and Approve User Requirement Specification (URS)**
 - Analyze the environment and constituents
 - Identify and define core services for CIRT
 - Define CIRT processes and workflow
 - Determine technology requirement
 - Determine reporting structure, authority & organization and human resource requirement
- 2 Design CIRT network according to URS**
- 3 Pre-installation and preparation step by step guide for network and hardware**
- 4 Remote installation and testing**
 - Incident reporting and tracking system
 - Helpdesk, website, mailing list software
 - Network monitoring and log retention solutions
- 5 Fine tuning of CIRT application and training**
 - Finalize policies, procedures, processes and documentations
 - Assess infrastructure for the constituency
 - Address legal issues
 - Training both on site in Bhutan and overseas
- 6 CIRT announcement/official inauguration of the project.**

Project Title: **Application System to Manage/Maintain Community Centers - Bhutan**

Source of Proposal: Ministry of Information and Communications (MoIC), Bhutan

Contact: Dorji Wangmo - Policy & Planning Division, MoIC -
dwangmo@moic.gov.bt

Brief Description

Enable accessibility of information and electronic services anytime, anywhere is instrumental in achieving Information society. Community Centre (CC) in the Gewog (Block) has been identified as one potential hub where community can have access to information and government services.

The Ministry of Information & Communications (MoIC) was mandated by the Royal Government to establish one Community Center (CC) in every Gewog totaling to 205 CCs in the country. The project was started in mid-2009. As of today, 182 CCs have established.

The CCs are located in very remote areas and not able to sustain the services. Therefore, the Government approved 5 year subsidy to Bhutan Post, who is currently operating and managing the CCs. The subsidy is based on the business model developed by Bhutan Post and MoIC. The subsidy is exclusive of recurrent Internet cost. Sustaining operation of CC is seen as a big challenge in the long run.

Beneficiary Country

Bhutan

Project Objective(s)

Ensure successful operation, management and maintenance of the Community Centers through development of appropriate application system/tools.

Expected Results

Community Centers (CC) operator and Government able to collect required data/input for analysis and study of CC user pattern and contribute to better policy formulation/plans that will lead to sustainable operation of CCs.

Outcome: Citizen has improved access to information leading to enhancement of community empowerment.

Estimated Start Date

January 2014

Estimated Duration

6 months

Estimated Budget

USD 50,000

Main Activities

MoIC's technical team will work closely with international consultants in deploying the application system in the Community Centers. They will carry out installation, testing, fine tuning of application and user training for officers/ staff from Bhutan Post (CC operator) and other relevant government agencies.

Project Title: Empowering Farmers Through Connecting to Market Through ICT (Internet and Mobile Phone)

Source of Proposal: Bangladesh Institute of ICT in Development (BIID) Bangladesh

Contact: Shahid Akbar - Bangladesh Institute of ICT in Development (BIID) - shahid.akbar@biid.org.bd

Brief Description

The Market Linkage Program (MLP) is online information and trading portal for agricultural products. Access to market (information and transaction) for the farmers is a major constraint in Bangladesh which causes financial loss and hinders improvement in livelihood process. The core purpose of MLP is to address the needs of farmers for marketing (selling) their produces at fair price and also to provide updated price and market information to them. The platform will act simultaneously as a virtual market place for actors in the value chain including farmers, local traders, wholesale/retail traders, bulk buyers and also physical service facilities through telecentres/information centres. The MLP project is jointly implemented by Bangladesh Institute of ICT in Development (BIID) and Grameen Phone (GP). Other partners are Eastern Bank Limited, Katalyst and ACI Limited. BIID is using its e-Krishok network of farmers and other value added services to offer under MLP.

Through this service sellers will be able to sell their goods without going to the physical market. Likewise, buyers will be able to search for their desired items available from all over the country over the internet. The scope of the service includes online negotiation and ordering system for agro commodities along with secure mobile payment mechanism built within the system. Mobile based instructions will go to the bank system for online fund transfer. Agents will work as the human interface between sellers and buyers in order to ensure smooth delivery of goods form end to end. Sellers will be able to withdraw money at any time from ATM booths, banks, cash-out agents or POS outlets. The platform will be accessible from multiple access points such as Community Information Centers (CICs), mobile phones or any point with internet connectivity which will make it more convenient for users. Other than online trading opportunity, MLP will also provide various value added services such as market information, price information, database of various chain actors, Quality Control, demand-supply data etc.

With learning experience from Telenor's e-Mandi project in Pakistan the MLP concept has been developed with the vision of utilizing the benefits of ICT and the huge opportunities that internet provides as a development enabler for rural people.

Beneficiary Countries

Bangladesh
Myanmar
Pakistan

Project Objective(s)

The underlying objective of MLP is to remove trade barriers in the existing agriculture value chain in Bangladesh. The broad objectives of this project are:

1. Empowering farmers through creating opportunity to access wider markets by utilizing the mobile phone, internet and other ICT tools as a development enabler;
2. Facilitate framers an alternative market channel to address their demands for selling their produces in fair prices;
3. Facilitate various value added services for agro-products;
4. Establish e-trading system in agro-commodity trading in Bangladesh;
5. Reverse the supply driven market system into a demand driven one.

Expected Results

The goal of the Market Linkage Program is to integrate the existing agro-value chain actors and make them a part of an online based service platform. The direct benefits expected from this project are:

- 2,000 farmers will be directly and 10,000 farmers will be indirectly benefited through the Market Linkage Program;
- An inclusive and efficient online platform for direct upstream sales opportunity for farmers and other value chain actors;
- Online database/portfolio of local agro-value chain actors;
- Develop a process to ensure easy access to price information through which sellers will be able to compare different market prices and increase their bargaining capacity;
- Increase internet uptake and ICT enabled services in rural areas;
- Demand-supply data created which will help forecasting and integrated planning of production and harvesting;
- Create an online network of producers and buyers and other stakeholders all over the country;
- MLP grading system established to ensure quality products;
- Involving intermediaries in MLP with defined value-addition role will bring transparencies and reduce their influences on price and procurement process.

The indirect outcomes expected from this project are:

- Financial institutions involved and create new opportunities for various financial services for agro value chain actors, specially farmers;
- Create new employment and business opportunities such as, MLP agents, business promoter, online trading centres etc.;
- Awareness building among the stakeholders including other telecom operators, bulk buyers and value chain actors on using ICT enabled trading services;

- Government and development partners will be involved to integrate the MLP experiences into existing system ;
- Will be replicated in Pakistan and Myanmar.

Estimated Start Date

January 2014

Estimated Duration

24 months

Estimated Budget

USD 365,000

Main Activities

The activities required to implement the project is given below in phases:

Preparatory: Developing the Business Model

Item Selection : Localization of product information

Partnership and role define

HR recruitment (for project management & field coordination)

Technical: Development of online platform

Connectivity with banks and telecoms payment system

Buyer and Seller profile

Pre-testing the service

Location Selection: Field Visit

Data collection

Creating profile of local value chain actors

Creating database

Centre Setup: Assessing logistical readiness of centres

Provision of necessary logistics (computer, internet modem, multi-plug, SIM card for cash-out, mobile phone set

Centre profiling

Filed Level Activation: Agent selection & recruitment

Assignment of business promoter

Farmers Selections (for pilot)

Bank accounts opening for agents and farmers

Awareness Building: Organizing group based interaction/ Court Yard Meetings (CYMs)

Designing and printing of promotional materials (banners, festoons, leaflets etc.)

Promotion campaign

Capacity Building: Preparing training manual (for agents and farmers)

Training of agents (on technical issues, QC, others)

Training of farmers (grading-sorting, QC, others)

Quality Process Establishment: Developing guide on quality parameters

Project Title: Improving the Collection of ICT Statistics for Development, in Asian LDCs and Pacific SIDS.

Source of Proposal: UNESCAP

Contact: Tiziana Bonapace - UNESCAP - bonapace.unescap@un.org

Brief Description

The project will be composed of three main phases (see activities section below for more details):

1. Identification of ICT statistics needs and review of capacities at the national level;
2. Setting up of national master plans to map out and prioritize the production of ICT statistical indicators in line with ICT policies;
3. Building statistical capacities for the production of statistics on the information economy.

Beneficiary Countries

Afghanistan
Bangladesh
Bhutan
Cambodia
Fiji
Kiribati
Lao P.D.R.
Marshall Islands
Micronesia
Myanmar
Nauru
Nepal (Republic of)
Palau
Papua New Guinea
Samoa
Solomon Islands
Timor-Leste
Tonga
Tuvalu
Vanuatu

Project Objective(s)

The objective of the project will be to develop the capacity of the beneficiary countries to better produce statistical data that are of high quality, relevance and timeliness on ICT policy issues.

Expected Results

The project will result in an improved statistical and information base with data on ICT issues, that are accurate, internationally comparable and country-relevant.

After the project, the beneficiary countries will be in a better position to implement and monitor their ICT policies through the production of more and better statistics on ICT issues.

Estimated Start Date

June 2014

Estimated Duration

36 months

Estimated Budget

USD 1,200,000

Main Activities

1. Identification of national of ICT statistics needs and capacities

For each beneficiary country, the project will establish a list of ICT statistical indicators that are available nationally. It will also review the national ICT policy, in the light of the general development policy of the country. This will help identify what statistical tools are available to the national policy makers, and which ones are missing to design, implement and monitor the national ICT strategy. This study will also identify clearly the main stakeholders at the national level, both in terms of data production and of ICT policy-making. The study will then propose a list of ICT indicators to be produced in priority, to better inform ICT policy making. In doing so and when possible it will draw on existing statistical indicators developed by the Partnership on Measuring ICT for Development, as methodological guidelines already exist for their production.

2. Setting up of national master plans to map out and prioritize the production of ICT statistical indicators in line with ICT policies and the national statistical system capacities

This phase will be critical for the national ownership of the project. It will ensure that national priorities are well reflected in the overall national statistical system.

Based on the finding of the study, the project will organize national discussions that will lead to the establishment in each beneficiary country of a national master plan that sets the countries objectives and priorities for ICT measurement. This will bring together the ICT policy making entities, the national statistics systems and other entities that are in charge of the country's overall development strategy. Together they will decide which statistical information is

important in designing, implementing and monitoring the national ICT policies. They will also set up a list of ICT indicators that the national statistical system should produce to inform policy makers, with an order of priority. This order of priority will take into account the feasibility and cost of statistical production. Besides the order of priority, the Master plan will also address the inclusion of ICT statistics in the overall statistics production programme of the National Statistical Systems of the beneficiaries. It will also address the crucial issue of financing the production of new data on ICT issues. This phase of the project will also address issues related to data dissemination strategy at the national level.

3. Building statistical capacities for the production of statistics on the information economy

The third phase of the project will seek to help the countries in producing better ICT statistics on ICT policies issues identified by the national Master Plan.

The project will provide tailor-made technical assistance and training to NSOs on ICT statistics production. These training activities will be based, when possible on the existing methodologies developed by various agencies of the Partnership on Measuring ICT for Development, including the trainings manual on issues such as ICT in households and individuals, ICT infrastructure, ICT and education, ICT in governments, or the information economy.

For ICT issues of relevance to the beneficiaries for which no internationally agreed standards exist, the project will seek to propose statistical methodologies based on best practices and adapted to the development level of the beneficiaries. This phase could also provide capacity building in terms of ICT data dissemination strategies.

Whereas the implementation of the first two phases of the project will be carried out almost exclusively at the country, the last phase (trainings) will deliver activities on an issue-basis in order to maximize economies of scales and cross-fertilization across beneficiary countries. Therefore, grouped training activities will be organized at the regional level on ICT statistical issues that are of relevance to several beneficiary countries. The project could also address individual country needs on an ad-hoc basis.

Project Title: "Connect School; Connect a Community" in Democratic Republic of NEPAL

Source of Proposal: Nepal Telecommunications Authority Nepal (Republic of)

Contact: Purushottam Khanal - Nepal Telecommunications Authority -
pkhanal@nta.gov.np

Brief Description

World Summit on Information Society (WSIS) has been set the target to connect all villages, schools, hospitals, and public centers by year 2015. Majority of people, especially rural people are still disconnected from the benefits of ICTs. Acknowledging the significant challenges in rural connectivity and the importance of schools in communities, the Govt. of Nepal has identified some of the strategies 'Connect a School, Connect a Community' to ensure equitable access to education.

There are 34,000 schools (7,000 higher Secondary schools and 27000 primary and secondary schools) within the country. Education has been considered as a fundamental right of the people by the Interim Constitution of Nepal 2007 and Govt. has identified some of the strategies to ensure equitable access to education. The Government of Nepal (GON) has introduced various interventions in order to achieve the goal of education in Nepal and envisioned for implementing and expanding.

NTA is one of the members of the steering committee of master plan and has responsible to give connectivity solution in to the all school. There are different partnerships excluding connectivity solution in the plan and all ICT equipment except connectivity will be managed by Govt.

But there is no connectivity solution in the plan. Thus as a member of the steering committee it is a NTA's responsibility to provide them best connectivity solution. Thus NTA has decided to use RTDF to provide connectivity and decided to send proposal to ITU seeking technical assistance to identified best connectivity solution to accomplish the project.

With aim to provide comprehensive ICT in education in all over the country we are seeking best solution on it and we think ICT can itself be a literacy that enables children, youth and every one to get benefit from the global environment.

Beneficiary Country

Nepal (Republic of)

Project Objective(s)

The Project is intended to:

- Create ICT- enabled learning environment in educational institutions.
- Expand the Internet access to schools and other educational institutions.

- Expand the accessibility to learning resources through educational resource sharing platform.
- Prepare teachers for ICT based education.
- Develop favorable environment for policy making and management for ICT based education
- Enhance ICT competencies of human resources working in education sector
- Facilitate the teaching learning process through the use of interactive digital contents.
- Develop and enhance policy and regulatory provisions for effective and efficient use of ICT in education.
- Promote Research and Development system in education.
- Strengthen Management Information System (MIS) and Office Automation System (OAS) in education sector.

Expected Results

- Reduced digital divide between rural and urban areas;
- Enhanced access and knowledge of education through ICT;
- Improved connectivity to the schools and communities;
- Enhanced use of e- applications for efficiency and socio-economic development;
- Increased development of local contents and applications; and
- Strengthened 4P Model to provide connectivity.

Estimated Start Date

January 2014

Estimated Duration

12 months

Estimated Budget

USD 50,000

Main Activities

- 1 Preparation of Project Document/January 2014
- 2 Appointment of National Focal Point/February 2014
- 3 Identification and selection of the schools for the pilot/March 2014
- 4 Evaluation of the requirements of each school (identification of the type of connectivity required, wireless router, switch, twisted pair cable, Nick Card etc.)/May 2014
- 5 Making arrangements to provide Internet facility/June 2014
- 6 Installation and commissioning of equipment in the identified schools/July 2014
- 7 Delivery of training course material to school teachers/August 2014
- 8 Official inauguration of the project/November 2014

Project Title: Samoa Cyber Security

Source of Proposal: Ministry of Communications and IT, Samoa

Contact: Ronnie Aiolupotea - Ministry of Communications and IT -
ronnie.aiolupotea@mcit.gov.ws

Brief Description

This proposal is prepared to develop a policy framework for Cyber Security in Samoa. This is one components of ecosystem in sustaining broadband investment the government is doing at the moment. Also it focuses on development of trainings and workshops to build local capacity not only to policy makers, law enforcers, citizens especially the children and young ones.

Beneficiary Country

Samoa

Project Objective(s)

1. To develop a cyber security policy framework suitable for Samoa.
2. To establish a focal point for cyber security in Samoa.
3. To develop a train the trainer program.
4. To conduct ongoing trainings to all parts of the country.

Expected Results

1. Final copy of cyber security policy in place and adopted.
2. Focal point established and registered under an official body.
3. A train the trainer program in place and conducting trainings for all possible trainers.
4. Ongoing trainings conducted and implemented.

Estimated Start Date

March 2014

Estimated Duration

3 months

Estimated Budget

USD 50,000

Main Activities

1. First Workshop - Ministers, Associate Ministers, Members of Parliament, Church Ministers
2. Second Workshop - Government CEOs, Private Sector, NGOs, Village Mayors
3. Third Workshop - IT Companies, Internet Service Providers, Law Enforcement Bodies, Judiciary and Ministry staff and executive.
4. Fourth Workshop - Technical/ Network Administrators, IT Practitioners, Security Expert, Cyber Crime Investigators, Incident handlers (Security Expert and Network Admins)

Project Title: Regional Distance Learning Centres for Solomon Islands National University (SINU)

Source of Proposal: Solomon Telekom

Contact: Keir Preedy - Solomon Telekom - Keir.preedy@telekom.com.sb

Brief Description

This project will deliver 10 regional Distance Learning Centres, situated in SINU premises in the regional centres of the Solomon Islands to enable University Students to complete their studies remotely without having to relocate to Honiara. This initiative aims to increase participation in University education for regional people and help develop the regional economies of the Solomon Island Provinces as a result.

At each location a fully equipped distance learning centre will be created, equipped with up to 10 study computers with access to broadband internet and with student office applications. There will be print and copy facilities. There will be two dedicated video conference units per site supporting both one way classroom lecture format and two way interactive tutorials.

The centres will be hubbed back to the SINU campus over the Telekom network, with dedicated VSAT connections in each regional centre. The SINU campus will be directly connected by fiber to the Telekom core network and earth station facilities in Honiara.

One past failing of such initiatives is the failure to adequately fund operating costs. This proposal includes 3 years of funding for the operational costs of the service to enable SINU to benefit from the increased revenue from the student base and to transform their internal cost structure.

Likewise, attention will be given to training of staff from SINU and Telekom in order to let SINU be effective in managing this complex service and allow Telekom to provide a safety net in terms of system knowledge for the event of staff turnover.

Beneficiary Country

Solomon Islands

Project Objective(s)

- 1) Use Telecommunications to bridge the divide between city and regional areas in University Education;
- 2) Increase participation in University education overall;
- 3) Enhance the reputation and success of SINU whilst playing a part in their corporate development;
- 4) Support regional economic development through Halo effect.

Expected Results

- 1) Successful introduction of Distance Learning by SINU across 10 regional centres
- 2) Increased participation in University Education in the Solomon Islands – student numbers
- 3) Enable SINU to transform their cost and revenue base for future sustainability
- 4) Long term operational stability of the service
- 5) Become a platform for future service development

Estimated Start Date

April 2014

Estimated Duration

24 months

Estimated Budget

USD 5,000,000

Main Activities

- 1) Prepare classroom facilities in all locations (building renovation / decoration);
- 2) Design layout and content of each centre;
- 3) Procure furniture and equipment for each location;
- 4) Obtain Satellite bandwidth on LTC from Intelsat;
- 5) Procure VSAT equipment, install , cable and networking equipment for each location;
- 6) Procure teleconferencing solution for hub and each centre;
- 7) Direct fiber connect SINU HQ in Kukum to Telekom Fiber Access Network;
- 8) Commission hub facility at SINU Kukum;
- 9) Train SINU core support staff on system operations;
- 10) Install and commission each regional facility;
- 11) Train DLC operational staff in each regional centre;
- 12) Introduce distance learning service;
- 13) Operation and maintenance.

Project Title: **Harnessing and Preserving National Heritage and Ancient Cultural through ICTs**

Source of Proposal: Ministry of Posts and Telecommunications(MPTC), Cambodia

Contact: May Phoeung Le - Ministry of Posts and Telecommunications (MPTC) Cambodia - phoeung@camnet.com.kh/mey_phuong@yahoo.com

Brief Description

Cambodia is a small country, but we are one of the country rich in cultural and civilization in this region. Royal Government of Cambodia is proud of its culture as a number of tangible and intangible cultural heritages have gained international reputations and some have been listed as the world heritages such as Angkor Archeological Park, Royal Ballet, Sbek Thom or Khmer Shadow Theater and Preah Vihear Temple. "We have been preparing documents to include some more tangible and intangible cultural heritages in the world heritage list". However, we still have more temples across the country as well as arts; culture and tradition need to be preserve. Cambodia appealed to relevant organizations to help promote national culture through innovative technologies. Culture is the nation's invaluable spirit and identification, so it is very important to educate people to contribute to maintaining, protecting and giving value to national culture," With a view to preserve the authenticity and historical value of the ancient national cultural, Cambodia would like to seek support from ITU and other international Organization to work more closely in order to how we can use of ICT empowerment to Harnessing and Preserving National Cultural Heritage.

Beneficiary Country

Cambodia

Project Objective(s)

Develop, use and deploy ICT applications, national strategies and programmes to promote sustainability and preservation of national heritage and ancient cultural, keeping them accessible as a living part of national culture.

Expected Results

- Future generation's enjoyment and utility of national heritage and cultural legacy
- Appropriate ICT preservation tools, methods and applications, cultural digitization inclusive.
- Pilot projects, public awareness materials, programmes and fora.
- Awareness raising campaigns through educational contents films and videos on the importance of safeguarding cultural property.

Estimated Start Date

March 2014

Estimated Duration

36 months

Estimated Budget

USD 500,000

Main Activities

- Identification of outstanding cultural and natural heritage properties, particularly those that are in danger to be covered by the Project;
- Development and publication of ICT Tools on Harnessing and Preserving National Heritage and Cultural Legacy;
- Research, development and deployment of ICT applications and services e.g., digitization, ICT risk management and monitoring of national heritage;
- Training of museum staff to create national digital Object-ID system databases and inventories.



PRINTED BY:
International Telecommunication Union
Geneva, Switzerland
October 2013

MORE INFORMATION:
connectasiapacific.itu.int

PART OF THE ITU CONNECT SERIES OF EVENTS