

# MAINSTREAMING INFORMATION & COMMUNICATION TECHNOLOGY (ICT) FOR SOCIAL PROTECTION CHALLENGES AND OPPORTUNITIES IN ASIA AND THE PACIFIC



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## Abstract

Social protection to the vulnerable people plays a vital role for inclusive and balanced growth in developing and least developed countries. This issue has become even more pertinent in the recent years because of increasing globalization and free market economy. This increases the danger of more and more economic and social exclusion of vulnerable people thus posing a great challenge for national economies in the Asia-Pacific region. Though social protection has been largely recognized as an effective instrument to bridge the socio-economic and developmental gaps between people and communities, meaningful and concerted efforts are still lacking in most countries of the Asia-Pacific region. Towards this objective, the Information & Communication Technology (ICT) can play a significant role in providing innovative solutions in the delivery of social protection assistance to the targeted beneficiaries. This article discusses the challenges, opportunities and scope of various applications of ICT-based tools and techniques in the social protection sector for countries in the Asia-Pacific region.

## Introduction

Social protection is considered vital for inclusive and balanced development of the poor and vulnerable sections of society, especially in developing and least developed countries. Providing social security to the vulnerable people has been always a major issue to be addressed by national governments and their various administrative authorities in the Asia-Pacific region which has vast population reeling under extreme poverty and misery. The population is vulnerable to too many risks emanating from diverse sources such as national, health, life-cycle, social, economic, political and environmental. Unless these risks are properly dealt with and vulnerability is effectively addressed by the national governments, the developmental gaps between communities and countries would widen further with far-reaching socio-economic consequences.

In the age of globalization and knowledge economy, the developmental gaps existing in countries and the region can be narrowed down with the help of advanced technology. Technological advances in various fields are known to provide innovative tools and solutions for developmental and commercial activities. Globalization and

free market economic regimes also provide a favorable environment for wide-spread and cross-country diffusion of technological advances. It is now being recognized that advanced technologies have tremendous potential for delivering prompt, efficient and high-quality services to the vulnerable and needy population of the society. Hence, there is a need to exploit the potential of technology by applying it in the social protection sector. The technology can help provide an optimal tailoring of social protection instruments and benefits thereof in a financially feasible way. The UN Millennium Development Goals (MDGs) with regard to poverty alleviation and social protection can thus be achieved faster by using the vast array of technological tools and solutions that are available now.

There are ample evidences to show how different technologies are being used in the social development sector. The fields of technology which can play major roles in delivering social welfare, security and protection include: Information & communication technology (ICT), renewable energy, water harvesting, sanitation, health & hygiene, disaster preparedness, mitigation and management, housing & rural construction, assistive tech-

nology for the disabled etc. When applied judiciously, these technologies can provide social and economic empowerment to the poor and vulnerable sections of the society. Towards this objective, the ICTs clearly have a significant and more direct role to play especially in the social protection sector. In this sector, ICT tools and techniques are gaining immense popularity as they provide innovative solutions in delivering social protection assistance to the targeted beneficiaries. This paper intends to assess the scope of various applications of ICTs in the social protection sector to target recipients of social protection programs and schemes in the Asia-Pacific region. The paper also deals with the challenges and opportunities of ICTs in the social protection sector for countries of the region.

## Setting the agenda

As envisaged by the MDGs, global efforts are currently being directed towards addressing the many dimensions of extreme poverty including penury, hunger, disease and inadequate housing. A definition of social protection as put forward by UNDP International Poverty Centre (IPC) presents a meaningful and comprehensive understanding which captures most of the critical dimensions of poverty alleviation (UNDP IPC, 2006). As per this definition, "Social protection aims to enhance the capacity of poor and vulnerable persons to manage economic and social risks, such as unemployment, exclusion, sickness, disability and old age." In realistic terms, social protection is aimed at: providing support to the vulnerable and the poorest; acknowledging and addressing the hazards, risks and stresses affecting individuals, households and communities; seeking to support and develop the capacity of the poor to deal with the above risks; and designing and evaluating suitable institutional interventions to mitigate and/or reduce the risks and hazards.

The importance and urgent need to bring social protection high on the agenda for social policies and programs in countries of Asia and the Pacific, has been recently emphasized by Dr. Noeleen Heyzer, United Nations Under-Secretary-General and Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP). In her keynote address on 21 April 2010 to a regional conference in Manila on "Enhancing Social Protection Strategies in Asia and the Pacific", Dr. Heyzer called for a renewed focus on social protection policies and programs in areas such as employment schemes and pensions for older people, which are aimed at getting people out of exclusion and poverty and building resilience to risks and vulnerabilities, ....., thereby helping to ensure the achievement of the UN Millennium Development Goals in Asia and the Pacific (ESCAP Press Release, 28 April 2010). Dr. Heyzer further emphasized, "Stronger social protection has the potential to be a powerful tool for achieving not only the MDGs, but also for bridging the development divide in the Asia-Pacific region and ensuring sustainable and inclusive development." According to Dr. Heyzer, the social protection agenda in the Asia-Pacific region should include: poverty and risk reduction, social inclusion for inclusive growth, human security, and contribution to the achievement of the MDGs on poverty, hunger, health and education, etc.

## Addressing social risks and vulnerability

Understanding and managing the multiple risks surrounding and affecting the poor and vulnerable is considered crucial in designing and implementing any social protection strategy. Prior to developing a social protection strategy, there is a need to assess and evaluate the variety and magnitude of the potential risks that are likely to affect the vulnerable population

in a society. Better and appropriate risk management always gets the top priority by social protection policy makers, planners and administrators. The multitude of sources and different forms of potential risks affecting the vulnerable sections of society can be identified as (Emmanuel, 2008):

- **National** – Rainfall, Landslide, Volcanic eruption, Earthquakes, Floods, Storms, Drought;
- **Health** – Illness, Injury, Disability, Epidemic;
- **Life-cycle** – Birth, Old age, Death;
- **Social** – Crime, Domestic violence, Terrorism, Civil strife, War;
- **Economic** – Unemployment, Harvest failure, Business failure, Resettlement, Financial crisis;
- **Political** – Ethnic discrimination, Riots; and
- **Environmental** – Pollution, Deforestation, Nuclear disaster.

In view of the wide-spread nature and impact of these risks, the poor and vulnerable are generally subjected to a higher exposure than the rest of the society. The risks and associated problems can get even more compounded when there are fewer and less effective social protection instruments available with the responsible authorities to address the problems. Conventional modes of social protection delivery mechanisms lacking the requisite technological impetus can defeat the goals of any good social protection program. Therefore quick, effective and efficient delivery of social protection measures to the needy remains the basic issue to be addressed by the administration. In this context, ICTs can come in to play a critical role in enhancing the quality of social protection delivery mechanisms, tools and instruments. The ICTs would assist the authorities to effectively and efficiently manage those risks which can appear in a variety of forms and emerge from a variety of sources.

## Social protection mechanism

Social protection mechanism consists of a wide range of schemes and programs for delivering tailor-made services at the doorstep of the needy and vulnerable people of the society. These schemes are designed with an objective to deliver assistance in the form of either cash, kind or as different kinds of services such as cash transfer, coupons/stamps for basic goods and services (i.e., food, clothing) and basic health services ([www.adb.org](http://www.adb.org)). Different countries have developed and implemented different mechanisms to meet the social protection needs of their vulnerable population. Designing and developing suitable tools for social protection requires critical consideration of the severity and potential impact of the associated risks. Though these mechanisms are being designed for different socio-economic settings, they all have more or less the same basic structure and similar modes of implementation.

The common social protection instruments adopted by different countries across the world include ([www.adb.org](http://www.adb.org)): Micro-insurance; Agricultural insurance; Community-based social funds; Unemployment insurance; Work injury insurance; Disability and invalidity insurance; Sickness and health insurance; Maternity insurance; Old-age insurance; Life and survivor insurance; Social assistance – Welfare and social services, Cash or in-kind transfers (such as food and family allowances), Temporary subsidies (such as life-line tariffs, housing subsidies, or support of lower prices of staple food in times of crisis); and Disaster preparedness and management.

The schemes of social protection as outlined above need to be delivered to the needy and vulnerable population with an objective to protect them against the potential risks. The suc-

ICTs not only increase the performance of social protection agencies but also improve the quality of social protection tools and also the delivery mechanism of social protection programs and services.

cess of any social protection scheme or program would largely depend upon how effectively and efficiently these schemes are delivered at the doorstep of the beneficiary.

Smooth and efficient delivery of these social protection measures often encounters many challenges and constraints. If these constraints are not addressed in the most effective ways, they are likely to defeat the very purpose of any social protection policy. Many limitations which pose as obstacles on the way of implementing social protection programs have been identified (Rory, 2007; Shaikh, 2005):

- Traditional paper-based methods, being mostly physical in nature, are not only slow but also at times ineffective when directed at reaching out to large population.
- The targeted beneficiaries are mostly illiterate and do not understand the paper-based documents like postal money orders and vouchers.
- Traditional methods are not tamper-proof and could be easily subjected to abuse and malpractice while dealing with personal data and other sensitive information.
- Poor telecommunications infrastructure could act as a significant constraint in delivering social protection services.
- Often, there are no reliable national ID systems to verify identities of insured workers and claimants.

## ICT-strategy for social protection

It is now widely recognized that the development-divide in the Asia-Pacific region can be technologically addressed by national efforts directed at reducing the digital divide existing between countries in the region. In this context, the role of ICTs is well-known across the world. Rapid proliferation of ICT innovations in recent years has contributed enormously in opening new opportunities for service delivery and income generation in today's world of globalization and knowledge economy (John and Dennis, 2010).

ICTs not only increase the performance of social protection agencies but also improve the quality of social protection tools and also the delivery mechanism of social protection programs and services. The design and implementation of social protection programs present many operational challenges related to the determination of eligibility, the maintenance of a data base of beneficiaries, the documentation of compliance, the distribution of benefits, and the verification of program efficacy (Mike, 2005). These challenges can be effectively addressed by applying innovative ICT solutions.

The World Bank has raised the awareness of the importance of using ICT for development and some 80% of Bank-financed projects include ICT components throughout all regions and sectors including the social protection sector (Knut, 2002). Advanced ICTs have been employed in the social protection sector by many developed and developing countries across the world; however, there is a need to accelerate the process of ICT deployment and adoption in order to achieve the desired MDGs faster.

ICT tools offer a lot of potential in the context of designing and implementing social protection systems to meet the needs of countries in a changing

world. The benefits of ICT application in the social protection sector have been enormous. The ICTs offer many opportunities and challenges for the implementing authorities and agencies in their efforts to deliver social protection measures and services (Knut, 2001; Knut, 2002; www.adbi.org; Rory, 2007) which may include the following:

Cost minimization and maximization of benefits; Contributes to more transparency, thus avoiding fraud and corruption; Meet expectations of the customers; Services at any place and any time; Participation and decision-making; Integrated delivery of social services; Vertical (placement, counseling); Horizontal (e-Government); Diversification of end-devices; Sharing of resources; Single point contact (one-stop-shop); Self-service information and transactions; Reliable collection of contributions and payment of benefits; Maintaining an effective communication network; Simplification or elimination of routine and repetitive tasks; Active availability of services independent of place and time; Deliver sustainable and accessible services; Improve the quality of positioning of social security services (speed, actuality, contents); Self-learning by self-service devices; Enable new social security developments and increase social security coverage; Developing new forms of partnership in the delivery of social security; Achieve greater administrative and operational efficiency; Address the demographic evolution; Offers the potential of moving from traditional automation to transformation, i.e., aligning processes, organizational structures, and new technologies along the goals of social policies; and Improved image of social protection institutions.

In order to achieve the most out of all the above benefits, the ICT-based systems for the delivery of social protection measures need to be suitably designed according to the ob-

**At the national level, the ICT infrastructure for supporting social protection administration is based on the principles of e-Governance or e-Administration.**

jectives of the scheme and needs of the targeted beneficiaries. The implementation of these ICT-based tools and systems would depend on a number of crucial management issues before being actually put into practice. The key success factors which require critical consideration in the design and implementation of ICT-based tools for social protection delivery are identified as (Knut, 2001): Design & Implementation; Management commitment; User involvement; Capacity building; Flexibility in change; Professional project management; Design; Early consideration of ICT potential for transformation; Professional planning; Implementation; Professional procurement; and Sustainability.

### **ICT infrastructure for social protection**

e-Government is regarded as one of the key drivers of national social and economic development. At the national level, the ICT infrastructure for supporting social protection administration is based on the principles of e-Governance or e-Administration. It is an ICT-based strategic tool which is used to support government administration and public services. The main goal of e-Governance is significant improvement of effectiveness and efficiency of the public governance through optimization of data flow, application of advanced ICTs, reduction of operational costs, fighting hidden corruption, and so on (ISSA, 2005). The benefits of e-Governance include: transparency and openness, reliability and predictability, account-

ability, efficiency and effectiveness. With the help of ICTs, vast amount of information can be collected, stored, processed and disseminated. All these benefits are vital requirements of a good social protection scheme to become successful.

As ICTs present a wide range of technological options, the governments need to develop a framework to assess how these technologies may be used to improve the efficiency of the delivery of social safety net programs (Mike, 2005). Innovative approaches may include the use of integrated ICT systems across government agencies and the customer-centered delivery of social services through electronic channels (Knut, 2002). For the implementation of any social protection delivery system, the basic ICT infrastructure includes a variety of ICT equipment (e.g., hardware, software, networks) and applications (e.g., back-office systems, operational systems and management information systems). The automated systems consisting of computers, networks and databases are supported by automated office systems, electronic mailing systems and many more modern electronic gadgets.

Countries have adopted different approaches for developing relevant e-Government infrastructure for administering social protection schemes and programs. Important approaches are briefly presented in Table 1.

### **Innovative ICTs for delivering social protection**

ICT innovations are becoming more powerful and complex with satellite-based and fiber-optic cable networks thus opening up numerous technological possibilities for suitable incorporation into various developmental strategies across the world. ICTs also present enormous scope of application due to convergence of different technologies such as personal com-



Countries	e-Government approach
Bangladesh	Bank computerization; Biometric system
China	Networking
India	Unique Identification Number Project
Thailand	Web-portals; ICT-based system for nationwide poverty registration system; Networking; General Financial Management Information System (GFMIS)
Italy	Networking all back offices of the public administration functions; Linkage with intermediates; Web portals
Germany	PC- or Internet-assisted exchanges for care and support services
Poland	Local Information Centres with computerized data bases; Internet; Software for account maintenance and payment; System for Bilateral Information Exchange (SDWI); Web services
United Kingdom	Web-based delivery
Sweden	Web-based delivery; Unique Personal Identification; Electronic signature

Table 1. Important e-Government approaches in selected countries

Sources: Chinese Academy of Labor and Social Security, 2004; Shaikh, 2005; Wichian, 2005; <http://uidai.gov.in>; Helmut, et al., 2005

puters, telephones, telecommunication networks, digital cameras, digital video cameras and players, personal digital assistants (PDAs), slide projectors, mobile telephones, radio (digital, satellite) and television (cable, digital satellite) (Robert and Tom, 2002). These devices can be linked to others for faster and efficient sharing and exchange of information.

Some advanced ICT-based tools that find innovative applications in the social protection sector are briefly outlined below:

- Mobile computing
- Satellite communications
- Global positioning systems
- Radio frequency identification tags
- Kiosk systems – Applications for distance learning and job matching; information delivery; social assistance claim filing
- Internet kiosks – For services of insurance companies; community-based information and services
- Modern call centres – Automated call distributors (ACD) and advanced interactive voice response (IVR) are used for UI claim filing
- Interactive television, screen phones and Internet
- IVR data collection script for collecting information over a telephone-touch keypad
- Automated databases for on-line claimant verification
- Customized Graphical User Interface (GUI) software
- Electronic payment systems
- Pension Reform Options Simulation Toolkit (PROST) software of the World Bank
- Social Security Pensions Software
- Smart cards with PINs, fingerprint and other biometric systems
- Management Information Systems (MIS)
- Creation of personal medical file directly linked to the ICT development for improving the quality of health services
- Electronic health card equipped with a microprocessor which allows for authentication (electronic identity check), codification, and electronic signature

- Electronic patient files, telemedicine solutions
- Patient referral management systems for conducting of diagnoses via mobile phones and other telemedicine applications
- Rural clinics with IT infrastructure including wireless LAN and GPRS connectivity
- Electronic medical record system (EMR) or Electronic Health Record (EHR) system – A database that contains a comprehensive record of patients' medical histories

Potential applications of important ICTs in the social protection sector are presented in Table 2. Many innovative ICT equipment and systems have been suitably employed by various national and provincial governments and their agencies in the social protection sector across the world (Table 3).

## Successful ICT applications in social protection

There are many success stories showing how ICTs have been effectively applied and adopted in the social protection sector in both developed and developing countries. While the developed countries have shown successful ICT applications in the social protection sector, many Asia-Pacific countries have initiated innovative ICT-based projects for faster delivery of social protection assistance to the beneficiaries (Table 1). The following sections elaborate selected success stories which could be replicated in many Asia-Pacific countries with similar socio-economic situation.

### Social Security Pensions Software in Andhra Pradesh, India (<http://event.stockholmchallenge.se>)

In India, the Government of Andhra Pradesh implements a Social Security Pension (SSP) scheme targeted at the most vulnerable sections of society like the elderly, widows, disabled, and elderly weavers to provide them

succor and ensure their economic development. The SSP software was developed for delivering the social security pension benefits in a financially feasible way with special attention for prompt, efficient and high-quality services to the beneficiaries. It facilitates regular payment and monitoring of the disbursement so as to maintain transparency. The objectives of the SSP software are: Facilitating successful implementation of Pension Schemes; Transparency and visibility; Maximize accountability; Minimize leakage of funds; Reduce administrative cost and effort; and Accurate and fast disbursement; and Tackle corruption by close monitoring through web reports that are transaction-based.

In the program, standalone software is placed in the Districts. The software deals with generating the financial approvals, sanction orders for new pensions and release orders. The information is uploaded into the state server and is available in the website. The SSP software has enabled the clumsiness of the delivery system and reduced misrepresentation and fraud by building a comprehensive client database. The ICT solution has also brought in checks and balances to ensure proper working of the processes. All the key processes are captured in the software work-flows.

#### **The Unique Identification Number Project, Government of India** (<http://uidai.gov.in>)

The Government of India has initiated the Unique Identification project being implemented by the Unique Identification Authority of India (UIDAI) for the issuance of unique identification numbers (*Aadhaar*) linked to a person's demographic and biometric information. The Aadhaar will only guarantee identity, not rights, benefits or entitlements. The UIDAI envisions full enrolment of the residents, with a focus on enrolling India's poor and underprivileged communities.

Major ICTs	Potential applications
Mobile computing – Personal Digital Assistants (PDA)	Determination of eligibility; Documentation of compliance; Distribution of benefits; Verification of program effectiveness
Biometrics	Documentation of compliance; Distribution of benefits
Satellite communications	Determination of eligibility; Documentation of compliance; Distribution of benefits
Global Positioning Systems (GPS)	Determination of eligibility; Distribution of benefits; Verification of effectiveness
Simple and Smart Cards, Magnetic Strip Card, Smart Cards – Integrated Circuit Memory Cards, Integrated Circuit Micro-processor Cards, Optical Memory Cards	Documentation of compliance; Distribution of benefits
Radio Frequency Identification (RFID) Tags	Documentation of compliance; Distribution of benefits
Automated Teller Machines	Distribution of benefits

Table 2. Potential application of major ICTs in the social protection sector  
Source: Mike, 2005

The Registrars that the Authority plans to partner with in its first phase such as – the Mahatma Gandhi National Rural Employment Guarantee Scheme (NREGA), Rashtriya Swasthya Bima Yojna (RSBY), and Public Distribution System (PDS) – will help bring large number of the poor and underprivileged into the UID system. The UID method of authentication will also improve service delivery for the poor.

Technology systems will have a major role across the UIDAI infrastructure. The Aadhaar database will be stored on a central server. Enrolment of the residents will be computerised, and information exchange will take place over a network. Authentication of the residents will be online. The Authority will also put systems in place for the security and safety of information.

#### **The Pensions Reform Options Simulation Toolkit (PROST), The World Bank** (Knut, 2002; World Bank, 2000)

The World Bank's pension reform options simulation toolkit models pen-

sion contributions, entitlements, system revenues and system expenditures over a long time frame. The model is designed to promote informed policy-making, bridging the gap between quantitative and qualitative analysis of pension regimes. It is a flexible toolkit, easily adapted to a wide range of countries' circumstances. Modeling pensions can also assess different reforms, informing both policy-makers and the public about the impact of different reform options.

### **Opportunities for Asia-Pacific**

The Asian and Pacific countries have been actively implementing many innovative social protection schemes for their vulnerable population. These schemes are of various kinds and are targeted at different vulnerable groups of population in the respective countries (Giang and Wade, 2009; UNICEF, 2009; Edi, 2007; <http://www.ipc-undp.org>; ADB, 2008; Shaikh, 2005; World Bank, 2006; Dao, 2002). Some of these are enlisted below:

ICT tools	Social protection schemes/programs	Country/Region
Automated Teller Machines, Mobile Pay Stations, Mobile Computer, Satellite Modems/Phones, GPS Devices, Smart Cards and Biometrics	Cash transfer programs to the poor	Bangladesh
Social Security Pensions Software	Social Security Pension Scheme	Andhra Pradesh, India
Mobile phones and web-based technologies	Disease monitoring	Andhra Pradesh, India
Networking	Golden Insurance Project	China
Web portals, Information networks	Poverty eradication e-Governance	Thailand
Management Information System (MIS), e-governance Electronic submission of application and declaration forms	Social insurance	Azerbaijan
Mobile telephone nets, patient referral management systems, telemedicine applications	Health services delivery	Africa
m-Health (free 'please call me' SMS messages) IT infrastructure (computers, wireless LAN, GPRS connectivity) for rural clinics	Primary healthcare	
Electronic national cards	Health insurance, Social security	Rwanda
PDA's for remote data collection	Health information	Uganda
Web-enabled pensions system	Social security	Tanzania
Integrated ICT platform with modular software application system eDeclaration	Employment Social insurance	Turkey
Magnetic card named 'carte Vitale' Website named AMeli (www.ameli.fr) Simulator named CEDRE (Calculateur Expert de DroitsREtraite) Website 'ANPE.fr'	Social security, Health insurance Health insurance Pension scheme Employment	France
PIN (Personal identification numbers) Phone service through an automatic system or operators (inbound & outbound), fax, mail Computerized system named 'SILES'	Social welfare Social assistance Registration of foreign workers	Italy
PC- or Internet-assisted exchanges Electronic job exchanges Electronic health card	Care and support services Employment Health insurance	Germany
Multi-channel service environment	Social security	Finland
Local Information Centres using computer technologies, computerized data base; Internet site e-Government, electronic signatures 'Platnik' (Payer) software, Web information centre Automation of unemployment insurance (UI) claim filing ZUS electronic information channel	Employment Social welfare governance Social insurance Unemployment insurance	Poland
Electronic Service Delivery (ESD)	Social welfare	United Kingdom
Smart cards, web portals and CRM (Customer Relationship Management) systems; web-based 'Directgov' 'Halton Direct Link'	e-governance Communication claimants	
Electronic communications and services, electronic signatures, online information about public services, web-service	Social security, health services, e-governance, employment	Sweden
Modern call centre technology, such as automated call distributors (ACD), advanced interactive voice response (IVR) and customized Graphical User Interface (GUI) software applications for UI claim filing and processing	Unemployment insurance	United States

Table 3. ICT-based tools for delivery of social protection

Sources: Shaikh, 2005; <http://event.stockholmchallenge.se>; Chinese Academy of Labor and Social Security, 2004; ISSA, 2005; ISSA, 2007; GTZ, 2009; Helmut, et al., 2005; Knut, 2002; Wichian, 2005

**Bangladesh** – Bangladesh National Social Protection Project, Old Age Allowances Program, Program Widowed, Deserted and Destitute Women, Fund for Natural Disaster, Cash for Education

**China** – Minimum Living Standards Guarantee Scheme

**India** – National Old Age Pension Scheme (NOAPS) for destitute elderly people, The Mahatma Gandhi National Rural Employment Guarantee Scheme

**Indonesia** – Household and Community Cash Transfer Schemes; Work injury insurance

**Malaysia** – Old Age Social Pension; Disability and invalidity insurance

**Mongolia** – Child Money Program

**Nepal** – Old Age Allowance Program (OPA), Helpless Widows Allowance (HPA), Disabled Pension (DP)

**Pakistan** – Child Support Program, Individual Financial Assistance

**Sri Lanka** – Samrudhi; Cash transfer for disabled soldiers and families of service personnel; Widows and Orphans Pension Scheme

**Thailand** – Welfare Fund for Older People; Disability and invalidity insurance

**The Philippines** – Cash or in-kind transfers such as food stamps and family allowances; Unemployment insurance; Disability and invalidity insurance

**Viet Nam** – Disability and invalidity insurance; Social Guarantee Fund for Veterans and War Invalids; Social Guarantee Fund for Regular Relief (SGFRR); Regular monthly benefits for elderly alone, orphans, and disabled civilians; Contingency Fund for Pre-harvest Starvation and Disaster Relief (emergency)

In view of the wide variation in the nature and coverage of social protection schemes in the Asia-Pacific region, the countries are required

The Asia-Pacific countries need to better understand the current trend in the application of ICTs in the social protection sector, costs and benefits, and design and implementation of ICT-enabled systems for delivery of social protection measures.

to adopt faster and efficient modes for quick delivery of social protection assistance measures and services to the targeted population. The countries can make use of the advanced ICTs which present wide range of options for the delivery of social protection assistance. Developed countries in Europe and elsewhere have successfully adopted many of these ICT applications in their social security sector. The Asia-Pacific countries need to better understand the current trend in the application of ICTs in the social protection sector, costs and benefits, and design and implementation of ICT-enabled systems for delivery of social protection measures.

Availability and access to advanced ICTs can become a major issue for some countries in the Asia-Pacific region. However, there are examples of success stories available in countries like China, India, Bangladesh and Thailand which show that ICT-enabled social protection can be a feasible option for other countries of the region as well. Currently, China has been taking measures to reform its social protection system through extensive use of ICTs. In China, the so-called 'Golden Insurance Project' makes all the computers in the social insurance administration agencies throughout the country connected by means of ICT thus enabling sharing of social security information of each participant via network (Chinese Academy of Labor and Social Security, 2004). The Unique Identification

project initiated by the Government of India makes extensive use of ICT tools including biometric identification systems, multimodal software, etc (<http://uidai.gov.in>). The Government of Bangladesh has also been taking steps to modernize its social protection sector by adopting advanced ICTs such as Mobile ATM, Mobile Computer, Satellite Modems/Phones, GPS Devices, Smart Cards, and Biometrics (Shaikh, 2005). These success stories indicate that technological capabilities for application of ICTs in the social protection sector do exist in some countries of the Asia-Pacific region. Therefore the issue of accessibility and availability of necessary technology can be effectively addressed by establishing relevant regional cooperation mechanisms.

## Conclusion

Considering the wide choice of ICT options available and their successful adaptation to the local conditions, the opportunities are enormous for the Asia-Pacific countries. Extensive application of advanced ICTs in the social protection delivery system seems a feasible proposition in the region as indicated by many success stories. The countries need to upgrade their ICT infrastructure so that appropriate and relevant ICT solutions can be integrated into the system at all level of operation. South-South cooperation could play a significant role in these efforts for sharing of experiences and best practices among countries in Asia and the Pacific. In some cases, availability of innovative technologies may become an issue to deal with; however, this issue can be suitably addressed considering the superior ICT strength and capability of some Asian countries like China, India, Republic of Korea and Japan. Asia-Pacific being one of the most populated and vulnerable regions of the world, application of advanced and innovative ICT-based solutions in the social protection delivery system could



contribute immensely towards achieving the Millennium Development Goals in the social development sector.

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