International Identity Management Conference

SEOUL, KOREA
SEPTEMBER 23–25, 2014

PROCEEDINGS

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Inter-American Development Bank
1300 New York Avenue, N.W.
Washington, D.C. 20577
www.iadb.org

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Preface and Acknowledgments

The main objective of the first International Identity Management (Id-M) Conference, organized by representatives from the Government of Korea (Ministry of Government Administration and Home Affairs), the African Development Bank (AfDB), the Asian Development Bank (ADB), and the Inter-American Development Bank (IDB), was to create synergies and disseminate specialized knowledge regarding the conceptual and practical complexities involved in modernizing civil identity and identification systems. The focus of the three-day event was on the role of identity management as a contributing factor to strengthen governability and improve public policies and services across the globe. The "Seoul Declaration on Id-M," which was approved by the delegates present and follows this section, reaffirmed the commitment to ensure universal and timely civil registration and legal identity for all.

These proceedings are meant to provide a condensed account of the presentations and discussions that took place at the conference. From an event of almost 200 participants from more than 80 countries, there was an incredibly rich selection of material to choose from, but we have tried extracting the key messages from each of the eight sessions at the end of each chapter.

It is the hope of the organizers of the Id-M Conference that the discussions and results from the event will continue to feed into the ongoing global discussions on the importance of timely and universal civil registration and identification.

We would like to extend a sincere note of thanks to Boubacar Djibo for setting the stage for the conference. We are also grateful to the peer reviewers—Maurice Mubila, Kaushal Joshi, Seok Yong Yoon, and Woong-joe Ko—for their critical inputs and to Estefanía Calderon for her multi-tasking capacities. We would also like to acknowledge the diligent work of Sarah Schineller and her team in the transcription, editing, and design processes.

Mia Harbitz
Lead Specialist, Registries

First International Identity Management Conference

Seoul Statement

PREAMBLE

1. We the participants from Africa, Asia Pacific, Latin America and Caribbean Regions assembled at the First International Identity Management Conference held on 23–25 September 2014 in Seoul, Republic of Korea;
2. Bearing in mind that the main objective of the Conference was to create synergies, promote South-South, regional and international collaboration and disseminate specialized knowledge to improve civil registries and civil identification systems;
3. Recalling the 1948 Universal Declaration of Human Rights being the founding principles of an individual's right to an identity;
4. Reaffirming the commitment of the United Nations (UN) member states made in 2000 to achieving the Millennium Development Goals (MDGs) by 2015 in which data on some of the indicators that monitor the MDG progress are compiled and provided by civil registration and vital statistics systems;
5. Taking into account that the Post-2015 Development Agenda should consider civil registration as fundamental to legal identity and all the rights that it confers on the individual and that legal identity is in turn crucial for inclusive social and economic development;
6. Taking into account that the Post-2015 Development Agenda is to leave no one behind and it is, therefore, necessary to constructively and deliberately close the identity gap by eliminating invisibility;
7. Recognizing that Civil Registration is a basis for civil identification of individuals and that an organic link between the two is critical;
8. Recognizing the centrality of evidence of identity of breeder documents such as birth certificates, among others, for identification, and further recognizing their contribution to national and international security, including facilitation of secure international travel and border control as well as secure public and private sector transactions;
9. Recognizing that an identity facilitates citizens' access to social services and, therefore, it is crucial that the identity management cycle and the identity infrastructure are effectively managed and secured to ensure public confidence and trust;
10. Noting the progress and achievements made by the Asia and Pacific, Africa, Latin America and the Caribbean regions in improving civil registration systems, vital statistics systems and civil identification systems;
11. Acknowledging the contribution of international development partners, regional organizations and bilateral cooperation as well as the role of the private sector and Non-Government Organizations in improving civil registration, civil identification and vital statistics;

WE HEREBY:

1. Commend the progress and achievements made by countries in improving civil identification management systems.
2. Acknowledge the need for comprehensive national identity policies to support decision making tools as well as for the protection of all individuals, enabling them to access their civil, legal, social and political rights, as well as the services for which they are eligible.
3. Acknowledge the urgency of universal birth and death registration as a foundation for secure identity and identification systems that will strengthen vital statistics systems and underpin public sector policies and programs.
4. Encourage Governments to put in place the necessary policies and legal framework on personal data protection and privacy in civil identification management systems.
5. Recognize the need for development of international principles and recommendations on linkages of civil registration and national identification systems.
6. Encourage Governments to strengthen and facilitate greater coordination between national identity and civil registration authorities and other key stakeholders in managing one's identity and to ensure effective registration of vital events.
7. Urge Governments to intensify their efforts in developing and implementing a holistic approach for the establishment of robust identification management systems.
8. Encourage countries to undertake in-depth assessments and put in place national action plans with identified resources aimed at accelerating improvements in civil registration and vital statistics and identity management.
9. Acknowledge the need for interoperability between civil registration, civil identification and other systems to enhance service delivery to individuals and to ensure timely, accurate and reliable data for decision making.
10. Urge the development of civil registration and identity management systems as key tools in reducing risks during disasters by contributing to disaster management and response.
11. Welcome mechanisms such as the upcoming Ministerial level conferences in Asia Pacific and Africa for Governments to commit to strengthen civil registration and vital statistics systems and as appropriate identity management.
12. Urge Governments to pursue at appropriate levels the call for the decade 2015–2024 to be declared a decade for Civil Registration and Vital Statistics.
13. Call upon development partners to continue to support efforts of governments in capacity building and resource mobilization and the harmonization of strategies to strengthen civil registration and identification systems.
14. Commend the Government and the people of the Republic of Korea for the generosity and warm hospitality accorded to the participants and for successfully hosting the Conference.
15. Commend the African Development Bank, Asian Development Bank and Inter-American Development Bank for organizing the Conference and urge the institutions to sustain the process through follow-up actions, including the organization of a second conference.

Seoul,
September 25, 2014

Introduction

The first International Conference on Identity Management, held in Seoul, South Korea, from September 23 to 25, 2014, was a joint collaboration between the Government of Korea, the African Development Bank, the Asian Development Bank, and the Inter-American Development Bank. The conference provided current and cutting-edge information on the many aspects central to the emerging field of identity management. The conference featured informative presentations, opportunities for South-South collaboration, and relevant lessons for all participants. As the host country, we appreciate the time and energy invested by the Ministers, Directors of Registries of the participating countries, and other delegates who traveled to South Korea. For this reason, we wanted to provide the best of what we could offer in terms of venue, logistics, and most importantly, content.

I am delighted to say that we met expectations—even exceeded them in some cases—judging by the evaluations of the participants. The publication of the proceedings and discussions from the International Identity Management (IdM) Conference will ensure that the conference outcomes will reach an even wider audience. This publication is also timely because Goal 16 of the new Sustainable Development Goals calls for the promotion of "peaceful and inclusive societies for sustainable development, [to] provide access to justice for all and [to] build effective, accountable and inclusive institutions at all levels." This goal states that the way to achieve this is to "by 2030 provide legal identity for all, including birth registration."

South Korea is a case in point. Having experienced colonization and the Korean War in the twentieth century, South Korea was one of the poorest countries in the world until the 1960s. The war destroyed the country's industrial infrastructure, and the nation's land had been extensively burned. Many of the nations represented here fought with us during the Korean War and sent aid to Korea during our period of extreme poverty. Half a century later, South Korea has gone from being an aid-recipient country to a donor country, with an economy similar in size to that of many developed countries.

South Korea does not possess an abundance of natural resources compared to other countries. While the country was recovering from the Korean War, a decision was made to invest in our human resources. This decision undoubtedly contributed to the rapid development of Korea, given that our highly skilled and educated workers have been the driving force behind Korea's economic development. Successive governments set education policies that created an environment for people to expand their capacities and transform their labor into economic development.

The success of this national program required an accurate and efficient resident information management system. In 1962, South Korea passed the Resident Registration Act, requiring all citizens to report births, deaths, and changes of residence,

including migration within the country and emigration abroad. Through accurate counts of the number of children in school, the number of citizens engaged in productive economic activity, and the number of one-person households in the district, each municipality was able to precisely determine the types of social services needed. Through systematic management of resident information by local government and statistics offices, we prepared the groundwork for effectively carrying out various educational and other social policies. It is my firm belief that the resident registration policy made a significant contribution to the development of South Korea.

What can South Korea's experience teach other countries? I believe that if a State wants to provide high-quality services to its citizens and residents, it must understand what those citizens need to thrive. Possessing the best information technology systems in the world, South Korea has adopted a revolutionary, cutting-edge initiative, called Government 3.0, for processing data, including resident information from the resident registration program. Through Government 3.0, administrative data can be efficiently and securely shared between institutions and departments. This will enable us to become an even more service-oriented nation that informs and benefits its citizens and takes care of their needs.

It was encouraging to learn during the conference that many developing nations are hoping to implement similar systems, and that the conference contributed to solidifying their ideas through the presentations of the panelists and the ensuing discussions.

On behalf of the Ministry of Government Administration and Home Affairs[1] (MOGAHA), I wish to thank each and every one of the delegates from the more than 80 countries present for their valuable contributions, which made the First International Id-M Conference a huge success. The inspiring keynote address by Boubacar Djibo, director of the Air Transport Bureau at the International Civil Aviation Organization (ICAO), set the bar high for the ensuing eight sessions summarized in these proceedings. The Joint Steering Committee for the Id-M Conference had worked for over a year to prepare the Id-M Conference. The Steering Committee's excellent work could be seen in the high quality of the presentations and the discussions that followed each session.

Last but not least, I wish to thank the esteemed representatives at each of the three regional development banks: Charles Lufumpa, Director of the Statistics Department at the African Development Bank; Bart W. Edés, Director of the Poverty Reduction, Gender, and Social Development Division at the Asian Development Bank; and Ana-Maria Rodriguez, Manager of the Institutions for Development Department at the Inter-American Development Bank. South Korea has long-standing relationships with the regional development banks, and the generous support provided by all three banks for the organization of the conference was a manifestation of concrete and effective South-South collaboration.

정 종 섭

Jong-sup Chong
Minister of Government Administration and Home Affairs, Korea

[1] Previously the Ministry of Security and Public Administration (MOSPA).

SESSION 1

The Role of Civil Registry for the Post-2015 Development Goals

The discussion underscored the need for modernization in both civil and identification registries by focusing on the need for effectiveness, sustainable development, and good governance.

CHAIR

Colette Roberts-Risden, Chief Technical Director of the Office of the Prime Minister of Jamaica. Ms. Roberts-Risden chaired the panel. Prior to becoming Chief Technical Director in 2013, she served as Director of Social Security in the Ministry of Labor and Social Security since 2007. She also held the post of Director of Public Assistance at the Ministry of Labor, where she played a major role in the design and implementation of the Programme of Advancement through Health and Education. Throughout her career, Ms. Roberts-Risden's main area of specialization has been social development. She earned a Master of Science in Development Studies from the Consortium Graduate School for the Social Sciences, University of West Indies, in 1996.

PANELISTS

Pali Lehohla, Statistician-General of South Africa. Mr. Lehohla has been chair of the Paris 21 and of the United Nations Statistics Commission. He was the founding chair of the Statistics Commission of Africa, and he is the chair of the African Symposium for Statistical Development. He was the vice president of the International Statistics Institute and the sponsor of the Young African Statisticians Movement. Mr. Lehohla holds a Bachelor's Degree in Economics and Statistics from the

University of Lesotho and a Post-graduate Diploma from the UN Regional Institute for Population Studies at the University of Ghana.

Jae-Hong Lim, Head of the United Nations Project Office on Governance. Mr. Lim is a former career diplomat who served 35 years in the Ministry of Foreign Affairs of the Republic of Korea. In 2008, he served as Deputy Minister for Planning and Coordination. He was ambassador to the Democratic Socialist Republic of Sri Lanka and the Kingdom of Thailand. Prior to joining Ministry of Foreign Affairs in 1978, he was the director of Human Rights and Social Affairs in the United Nations System. Mr. Lim holds a Bachelor's Degree in International Relations from Seoul National University, and he studied at the Advanced Center of Administrative Development, also at Seoul National University.

Jorge Luis Yrivarren, National Chief of the National Registry of Identification and Civil Status. Mr. Yrivarren has professional experience that spans public and private institutions. Professional positions he has held include electronic data chief of the national Electoral Office, manager of the business department at COSAPI-SOFT, general manager at ABCONTROL and head of computing and informatics at José R. Lindley and Sons. He is a professor in the master's and Ph.D. programs in the Systems Engineering School at the National University of San Marcos. He is the author of several articles on democracy, technology, and management. He holds a Ph.D. in Strategic Business Administration from the Catholic University of Peru, a Master's Degree in Business Administration from ESAN University, a Ph.D. in philosophy from the National University of San Marcos, and a Master's Degree in Strategic Management of Information Technology.

Hassane Cisse, Global Practice Director for Governance and Inclusive Institutions at the World Bank. Mr. Cisse leads the World Bank's operational and knowledge work on inclusive governance to support countries in building sustainable, inclusive, and trustworthy governance systems. Prior to assuming this position in 2014, Mr. Cisse was deputy general counsel for Knowledge and Research at the World Bank, and earlier served as chief counsel, Operations Policy and legal advisor on Governance and Anti-Corruption. Prior to joining the World Bank, in 1997, he served for seven years as Counsel, International Monetary Fund. Mr. Cisse holds a LL.B. from Dakar University, Senegal; an LL.M. from Harvard Law School, and graduate degrees in Law from the Universities of Paris I Panthéon-Sorbonne, and Paris II Panthéon Assas, and a graduate degree in History from the University of Paris I Panthéon-Sorbonne.

Sang-Kuym Kim, Professor of Constitutional Law and Dean of the Department of Law and Graduate School of Legal Affairs at Dongguk University in Seoul; Chief Deputy President of the Korean Law Professors Association; Deputy President of the Korean Public Land Law Association, and Deputy President of the Korean Association of Sports Entertainment Law. Mr. Kim is a working member of the Central Administrative Appeals Commission and the Public Information Commission of the Ministry of Social and Public Administration of the Republic of Korea. He holds a Ph.D. in law with a specialization in constitutional jurisdiction from Freiburg University, Germany.

INTRODUCTION

"As countries globally are assessing the progress achieved in attaining the Millennium Development Goals and charting the post-2015 development agenda, it is fitting to explore the role of civil registry," said Colette Roberts-Risden, who introduced this session on the role of civil registry for the post-2015 Development Goals. Although civil registries have existed for over 300 years, registry systems in many countries are inadequate. The World Health Organization estimates that globally two-thirds of all deaths are unregistered, and almost half of the world's children go unregistered and remain therefore without a legal identity. Civil registries, which support the right to a legal identity, are a foundation for good governance. They support inclusive development. She noted the call in the report of the UN High-Level Panel of Eminent Persons on the Post-2015 Agenda for that agenda to provide "free and universal legal identity."

DISCUSSION

Mr. Pali Leholha, Statistician General of South Africa, opened the discussion on civil registration and vital statistics (CRVS) post-2015 with a retrospective look at implementation of the Millennium Development Goals (MDGs), specifically the role of statistics. The MDG framework helped countries to track development progress on a regular basis and provided a structure for evidence-based decision making. In Africa, this process was accompanied by a drive toward democratization. Since some of the goals were not reached, efforts must continue beyond 2015.

Civil registration and vital statistics is at the core of the four challenges of the post-2015 agenda that the U. N. Secretary-General posed to the development community. The first of them, "leave no one behind," requires knowing who is there. Putting sustainable development at the core of national transformation can only be achieved if everyone who exists can be identified, as well as the resources that they use for their livelihood. CRVS is also an important component of building peace and effective, open, and just accountable societies, because in the absence of civil registration and vital statistics, the poor are always the victims. Finally, the challenge of transforming economies for jobs and inclusive growth affects primarily the poor. A fifth area, added

by Mr. Lehohla, is transforming information systems. Statistics must be transparent, must lead to accountability, and the results must be available to all. Only by doing this is it possible to talk about transformation.

A number of activities have been undertaken in Africa in the area of measurement. Alongside technology and democratization, the need for Africans to know and understand themselves as Africans has become very important. Mr. Lelohla pointed to progress on the 2010 censuses. Next came a five-year plan (2010–2015) to strengthen civil registry and vital statistics, supported by the African Development Bank, the Commission for Africa, and the African Union, chaired by the Economic Commission for Africa. This plan will be extended until the goals have been achieved. Africa has played a leading role in developing capacity in civil registry and vital statistics, including developing country-to-country support systems, engaging institutions of higher learning to train people on the governance and the use of civil registration, and starting a Young African Statisticians Program that aims to ensure the sustainability of the initiatives undertaken to date and to win the support of ministries and ministers in carrying this program forward.

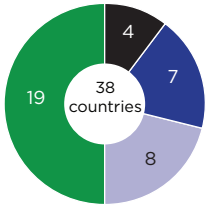
Mr. Lehohla outlined some remaining challenges and lessons from South Africa. In order to reach the minority population, which represents 80 percent of the South African population, concerted efforts were undertaken to identify bottlenecks and change strategies. Among the steps taken were setting priorities and intensifying efforts at registration immediately post-Apartheid. In 20 years, the Home Affairs Office has been modernized to improve services and governance. Information campaigns have accompanied the systemic changes, as well as policy instruments to ensure that the system actually works. These have been underpinned by amendments to the legislation, including the repeal of obsolete legislative processes

Current Trends of CRVS in Asia and the Pacific

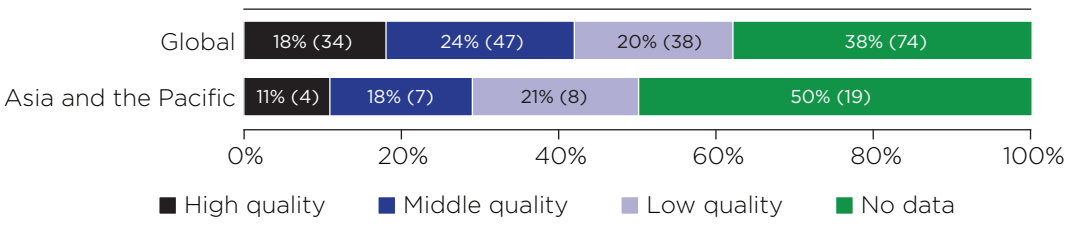
9 OUT OF 10 people in Asia and the pacific live in countries with *unreliable death statistics.*

Source: WHO.

Number of Countries in AP by Quality of Death Statistics



Percentage (number in parentheses) of Countries by Quality of Death Statistics



and procedures. In 1998, hospitals became centers of registration, which led to improvement in registering deaths. Mobile clinics and mobile units for registration and compliance with international standards were instituted. These initiatives created the demand for birth certificates to access child support grants, as well as death certificates to obtain burial rights. These ensured that civil registration was carried out. Finally, technology was used to improve security and timeliness of service delivery and enable regular and timely access to data.

All of these initiatives combined provided a conducive environment for the production of vital statistics. Recent initiatives to improve quality include collaborative efforts with CRVS stakeholders, training of medical practitioners in cause-of-death certification, use of IRIS to code causes of death, and employing contract staff to expedite data processing.

"The importance of civil registration is indeed recognized globally. It is recognized in South Africa, and major steps have been taken to ensure that civil registration is central to the governance of systems in South Africa," said Mr. Lelohla. "The key difference is that they must be governance- and policy-led and technology-enabled."

Mr. Jae-Hong Lim, head of the United Nations Project Office on Governance (UNPOG), commented on the importance of CRVS in the post-2015 agenda from the standpoint of the United Nations, citing two examples. The first one is the 2013 Report of the High-level Panel of Eminent Persons on the post-2015 Development Agenda appointed by the UN Secretary-General, which chose free and universal birth registration as a suggested target under Goal 10: Good Governance and Effective Institutions. The second is the 2013 UN System Task Team Report on Statistics and Indicators for the Post-2015 Development Agenda, which states that "reliable and comprehensive civil registration systems are a basic component of good governance, and are essential for the production of vital statistics and many health and population indicators."

The Asia-Pacific Region lags behind in CRVS compared to other regions. Of the nearly 230 million children under the age of 5 whose births have never been registered, 135 million are from the Asia-Pacific Region, representing 59 percent of the global total. According to the 2012 World Health Statistics report published by the World Health Organization, 9 out of 10 people in the Asia and Pacific Region live in countries with unreliable death statistics. The report points out that out of 38 countries in Asia-Pacific Region, only four had high-quality death statistics, while 19 countries had no data on death statistics. This means that 50 percent of countries in the Asia-Pacific Region have no data on death statistics, as compared to 38 percent at the global level.

Mr. Lim cited seven reasons for the relatively poor birth and death statistics in the Asia and Pacific Region. These are: a lack of sustained high-level political commitment; inadequate coordination and collaboration among the stakeholders; weak institutional capacity, insufficient resources, including financial and human resources; legal and legislative gaps; lack of awareness of the potential benefits of CRVS and its importance for development; and geographical barriers.

Initiatives undertaken to tackle these challenges and improve CRVS in the Region include the adoption by the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) of

two resolutions, in 2011 and 2013. The first resolution led to the self-assessment of CRVS, conducted by 48 countries in the Asia and Pacific Region. The second resolution established a regional steering committee to give guidance and advice. A high-level meeting on CRVS, held in December 2012, introduced the "make every life count" regional strategic plan for the improvement of CRVS. The Ministerial Conference on CRVS will be held in Bangkok, Thailand, in November 2015 under the theme of "get everyone in the picture." The goals of the conference are to agree on a Regional Action Framework and declare 2015 and 2024 the "Asian and Pacific Civil Registration and Vital Statistics Decade."

Commenting on the relationship between CRVS, governance, and sustainable development, Mr. Lim emphasized "reliable and comprehensive CRVS contributes to evidence-based policymaking, efficient public service delivery, and inclusive citizen participation." These contributions also help promote good governance, which eventually leads to sustainable development.

He also underscored the role of information and communications technology (ICT) and e-government in improving implementation of CRVS systems by increasing their integration and reliability. ICT helps to overcome geographical, logistical, and other barriers to universal civil registration. For example, the use of ICT, including mobile technology, can facilitate registration of vital events in remote areas. It also increases the capacity of government departments and agencies to compare, exchange, analyze, and disseminate vital statistics. Finally, technology enables more secure storage and protection of civil registration archives from natural disasters, wars, and cyber attacks. Integrated and reliable CRVS systems by the use of ICT and e-government ultimately contribute to public services through a whole-of-government approach.

Mr. Lim cited a good practice using ICT and e-government for CRVS: Peru's National Identification Card for Children, which won first place among countries in the Latin American and Caribbean region in the Category of "Improving Delivery of Public Services" at the 2013 UN Public Service Awards. ICT was incorporated into the civil and identity registration service. As a result, the percentage of children with national ID cards rose from only 0.1 percent in 2001 to 94.5 percent in 2012, accounting for almost 10 million Peruvian children. This achievement will ensure children's access to fundamental public services and safeguard their legal security.

In conclusion, Mr. Lim quoted Noeleen Heyzer, former executive secretary of UNESCAP, who said,

> "...well-functioning CRVS systems are critical tools to make every life count. Good datasets are not just about numbers; they are about good policies, human rights, and changing mindsets to build a more inclusive and sustainable Asia and Pacific region."

Jorge Luis Yrivarren, national chief of the National Registry of Identification and Civil Status (Registro Nacional de Identificación y Estado Civil, or RENIEC), began by explaining that Peru, a South American country of 30 million people, is a democratic republic with three branches of government as well as a number of government entities, known as autonomous government institutions, that do not fall under any of the three branches.

RENIEC, which implements policies on civil registration and identification, is one such constitutionally autonomous institution. RENIEC is charged with registering births, marriages, and deaths, as well as issuing national identity documents. Recently, it was granted the power to manage the digital registry. Thus, it now works with digital certificates and digital signatures so that citizens may maintain their identities in the online world.

An estimated 20 percent of RENIEC's approximately US$120 million budget is earmarked for poor and vulnerable sectors of society. RENIEC employs some 3,700 personnel who manage more than 4,500 registrars working at RENIEC as well as in municipalities, rural communities, and native/indigenous communities.

Every child born is assigned a unique identification code, based on which health professionals issue a certificate of live birth at the health facility at the time of the birth. Based on these documents, the birth is registered and the child is issued a national identity card. These three processes have now been integrated into one in order to simplify birth registration for parents. Presently, 99.1 percent of adults over 18 years of age and 96.8 percent of minors in Peru are registered. Moreover, 37 percent of all registries of births, marriages, and deaths, or 63 million, are digitized. RENIEC is in the process of developing an annual plan to prevent under-registration, a problem that affects mostly the poorest and most vulnerable sectors, which are usually indigenous communities. RENIEC endeavors to be accessible by reaching out to those who may not go to a registry location for these procedures.

With respect to modernization, Mr. Yrivarren explained that RENIEC is standardizing civil registration and identification processes in accordance with ISO 9000 requirements. It is connected to 240 consular posts overseas, through which registry services are offered to Peruvian nationals abroad.

RENIEC's work has achieved national and international acclaim, having won a United Nations Public Service Award in 2013 for its efforts to register children under 7, the Ibero-American Quality Award (2012), and many others. Peru currently presides over the Latin American and Caribbean Council for Civil Registration, Identity, and Vital Statistics (CLARICIEV). This year it joined the European Civil Registry Network (ECRN), the organization of European civil registrars as an Observer Member.

An essential strategy for successful civil registry is the formation of alliances, which has put RENIEC in direct contact with social programs that provide services to the most vulnerable sectors of society, as well as with government institutions. This is an indication of the priority placed on identity and civil registration in Peru's national policies. Some of the country's most important alliances are international partnerships with global organizations such as the Inter-American Development Bank (IDB), with which meaningful projects have been developed. For example, thanks to a project undertaken jointly with the IDB, Huancavelica, once known as the poorest and most under-registered place in Peru, now has a high rate of registration.

Technological innovation has been key to the country's high registration rate. The technology incorporated into civil registration and identification includes ten-finger print and facial biometrics and online services to all public and private

institutions. Electronic kiosks where people can obtain their birth certificate have been placed in urban shopping malls. Since last year, Peru has been implementing an online national identity document with PKI technology, and RENIEC is working on a virtual school to train registrars.

Nevertheless, challenges remain in achieving the goals of 100 percent identification rate for Peruvians, 100 percent electronic national IDs, 100 percent of archives digitized, and facial and ten-finger print biometrics for all entries. Mr. Yrivarren described pilot projects, including one on genetic biometrics, which experts agree is one of the most important means of identification and one that affords better access through online services linking municipalities throughout the country. RENIEC is seeking space to locate its headquarters and is taking advantage of opportunities to develop civil registries throughout Peru.

Mr. Yrivarren pointed out several important lessons learned in the process of working on civil registration in Peru. One is that identification is the responsibility of the State. Other lessons concern the role that technology plays in facilitating registration, the importance of being connected to social programs in order to reach the poor and vulnerable segments of the population, and that identification promotes social integration, improves service delivery to vulnerable populations, and helps to reduce human trafficking.

Mr. Yrivarren concluded by quoting an Argentine specialist in the field of CRVS, who described an illiterate person as one who cannot write his or her name and an illiterate State as one that does not know the names of its citizens. Peru is endeavoring to identify 100 percent of its citizens. RENIEC strives to participate in the strategy of "e-government, open government, and smart government," to continually adapt its processes to ISO standards, and to make more and better use of technology.

Hassane Cisse, Director, Governance and Inclusive Institutions, Governance Global Practice, World Bank, discussed the World Bank's perspective on identification for development. He indicated that although the Bank had been involved in this sector for many years, it was now anticipating taking a more comprehensive approach to the problem, given the centrality of modern civil registries and civil identification systems for access to basic rights and services. They are critical for effective and transparent policy decisions and improving governance; they improve service delivery for everyone; they prevent identity theft; and they are, above all, a powerful way to establish trust between stakeholders, which is a critical ingredient for successful governance.

Mr. Cisse outlined the World Bank's view of the main challenges in this area. Civil registration and identification systems cover only a fraction of the population in low- to middle-income countries, which makes it extremely difficult or impossible to accurately measure development progress in these areas. He noted that governments must overcome extremely complex and real barriers through vision and leadership. Some of the key challenges that they must address are regulatory concerns, working with the private sector to develop adequate infrastructure that would enable them to reach remote areas, and ensuring interoperability and trusted authentication protocols for data exchange among different services and solution providers. He mentioned some key figures that illustrate the magnitude of the problem of registration: 700 million children lack formal

identification; 2.5 billion people are still outside the formal financial system; ID-enabled digital transactions are worth US$70 billion worldwide, and potential savings in public spending could reach US$50 billion globally by 2020.

There are also many opportunities in this area. For example, wide availability of information and communication technologies in these areas would make it possible for governments, especially in the developing world, to "leapfrog" to more efficient, twenty-first-century civil registration and identification systems for their citizens. As a result, there is an urgent need for these issues to be more prominent on the agendas of governments. It is estimated that the global economy may grow from US$1.5 trillion to US$2.5 trillion by 2020, depending on the trust between citizens and businesses facilitated by governments. Of the five transformation shifts that are driving the post-2015 development agenda, the governance goal is that everyone should have legal identity.

In terms of scaling up the Identity for Development (ID4D) Agenda, the World Bank has begun ramping up its work. Civil registries together with unique identifications are a major issue for all sectors and are pillars of the economy. The World Bank is formulating a cross-sectoral approach that would allow it to work closely with development partners, donors, and governments to provide unified technical and financial support to low- and middle-income countries. This ID4D Agenda builds on several multi-sectoral initiatives led by World Bank teams in collaboration with external partners and client counterparts.

Some of the key initiatives are the CRVS Scale-Up Plan for 2015–24 that was presented at the Canadian Prime Minister's Summit in May 2014; the Digitizing Payments report, prepared for the G20 Summit in November 2014 focusing on global financial inclusion targets; the recently launched Digital Identity Toolkit for Africa; and some forthcoming reports on social protection and governance.

Mr. Cisse outlined some other efforts spearheaded by the Bank, including the establishment of the ID4D Cross-Practice Working Group, which began with stocktaking. An important step in the analytical work is being done to determine the status of each country's ID4D readiness index, and to identify priority actions and countries in need. In the area of advisory support, the World Bank is raising awareness on legal and regulatory challenges and providing support for policy development. In terms of operational engagement, the World Bank Group will provide technical and financial support for the development of integrated ID4D solutions. With respect to standards, the Bank promotes standards and regional approaches for establishing interoperability frameworks, integrated solutions, and cross-border applications. The Bank is also ramping up its efforts to strengthen and deepen its work in the areas of knowledge and partnership.

Mr. Sang-Kyum Kim, professor at the College of Law at Dongguk University, Seoul, Korea, described the Resident Registration System of the Republic of Korea. Its purpose, he explained, is to confirm the identity of Korean citizens. It enables self-differentiation of a specific individual's identity. The national government issues proof of residency by region and assigns citizens the responsibility to possess it. The most important function is to update individuals' residency or migration status for management by the State. The

legal basis for the Resident Registration System is found in Article 2 Clause 1 of the Constitution, which establishes the qualifications for citizenship. Because the Resident Registration System limits the residency and migration of citizens, it requires a legal basis as well. Thus, in accordance with Article 37 Clause 2 of the Constitution, the government enacted and implemented the Resident Registration Act.

Thus, the national government manages citizens through the Resident Registration Act and carries out its responsibility to protect the rights of citizens through this law. In order for the government to manage the citizens, it must confirm their identity and ensure their identification. The Constitution and the Resident Registration Act provide the legal basis for this policy. The function of these laws is to manage individual citizens, separating them by residential units. The law also serves to differentiate individuals by assigning birth or resident registration numbers. Furthermore, Article 24 Clause 1 of the current Resident Registration Act authorizes the issuance of the official national identity card, which confirms the identity of each individual.

Mr. Kim briefly explained the history of Korea's Resident Registration policy. Before the Resident Registration Law was passed, the regional government of each province created its own identity card system similar to the current national identity card system. In 1962, the Resident Registration Act was enacted and implemented, issuing identity cards at a national level. In 1968, the Resident Registration Law introduced unique identification numbers, or resident registration numbers, to differentiate individuals. Every citizen is assigned a unique number that is unchanged throughout his or her life.

In 1968, the Resident Registration Act issued 12-digit resident registration numbers. By 1975, the system began issuing a national identity card to every citizen over the age of 17, and the resident registration number became 13 digits. The Resident Registration Act continued to evolve. In 2009, the Resident Registration Data Center was installed in the Ministry of Government Administration and Home Affairs, Korea, in order to issue the national identity cards that replaced the identification cards issued by the governor of each regional government.

Mr. Kim explained that the regional governments are in charge of carrying out resident registration in accordance with the Resident Registration Act. The national institution that directs and manages resident registration is the Ministry of Government Administration and Home Affairs, Korea. Regional governments provide the revenue required for the management and operation of resident registration. Next, regional governors are charged with the responsibility of keeping records containing personal information on citizens who reside in the region they govern, including recording, managing, and preserving resident registration documentation.

Resident registration is ruled by the principle of report. One of the two core policies in the Resident Registration Act is the resident registration numbers policy. This policy differentiates individual citizens by assigning them a unique number at birth and confirms individual identity.

Because resident registration numbers contain a lot of information about individuals, their use has recently been the subject of debate in connection with issues of personal information security. The resident registration number contains information

on date of birth, residency, and gender. The national identity card issued to citizens over 17 years of age contains the photograph, name, the resident registration number, address, date issued, the issuing institution, and the fingerprint of the citizen for identification. Because it contains so much personal information, the damage of identity theft is extremely high when the numbers are stolen. Therefore, the South Korean government started to develop another identification system to substitute the resident registration numbers whilst putting limits on the collection and use of the resident registration numbers.

Once again, the greatest challenge for the operation of the national identity management system in Korea is the collection and usage of the resident registration numbers. Thus, the government has banned both the public and the private sectors from collecting and using resident registration numbers without the permission by law. For the future, the Korean government is working on an electronic national identity card system, currently adopted by many other countries, to improve the efficiency of the identity management system.

QUESTIONS AND ANSWERS

A question was raised about the safeguarding of data privacy and confidentiality, specifically, whether it is backed up by a legal framework or built into the CRVS system. A panelist replied that, in the case of Korea, by law each individual's resident registration number and all of the personal information on the national identity cards are protected. Civilian organizations and private industry are forbidden from using information from these sources to create a database. Addresses are important for taxation, insurance, and voter registration purposes. Since the address is at the center of the legal relationships, registering one's address benefits citizens. Another panelist added that Peru recently passed a Personal Data Protection Law, which protects "sensitive," or "reserved," that is, health-related data.

The panel was asked for an opinion about the advisability of including residential addresses in the national registration system, in view of the impracticality of administration and the danger of giving the government that much power. On the other hand, including addresses may improve service delivery. A panelist responded that an administrative fee or fine is charged if people delay reporting their change of address more than 14 days. The reason is that correct addresses are needed in order to administer citizens' right to vote. Tax forms are also sent to home addresses, and fines are assessed when taxes are overdue. Similarly, in Peru citizens must update their information when they change addresses. While the fine is small, not reporting one's change of address is a crime. RENIEC created an address verification system, which verifies the legitimacy of changes of address reported. This is because having the correct address registered is critical for the electoral process.

In response to a question about progress toward DNA identification systems, a panelist commented that digitized ID cards enable the State to provide more services to citizens online. Digital signature will be another implemented element that will be guaranteed by electronic national ID cards. In Peru, the Certificates and Digital Signatures Law has been in effect for 14 years, and electronic national Ids are a step toward implementation of this law. Peru is implementing PKI technology, which will further guarantee the safety of online transactions.

Key Lessons and Recommendations

- Implementation of the system and national policy instruments should be accompanied by awareness-raising campaigns. These should also be underpinned by amendments to legislation, including the repeal of obsolete legislative processes and procedures.
- The establishment of registration offices in hospitals has greatly increased registration of both births and deaths.
- The use of mobile clinics and mobile units for registration and compliance with international standards is key in registering hard-to-reach populations in remote areas.
- The use of modern ICT is vital to facilitate registration and documentation in remote areas. It helps overcome geographical, logistical, and other barriers to universal civil registration. It also enables more secure storage and protection of civil registration archives from natural disasters, wars, and cyber attacks.
- The use of mobile technology increases the capacity of government departments and agencies to compare, exchange, analyze and disseminate vital statistics.
- Forming alliances between civil registries and social programs promotes social integration, improves service delivery to vulnerable populations, and reduces human trafficking.
- Transforming information systems is one of the challenges of the post-2015 agenda. Statistics must be transparent, must lead to accountability, and the results must be available to all.

SESSION 2

National Identity Policies

Introducing a national ID system requires an appropriate policy framework. The session addressed some of the main policy issues that countries should consider, including the implications of linking the national ID system with civil registration, and of linking public (legal) registries to private (administrative) registries, as well as issues related to privacy, security, and the use of biometrics.

CHAIR

Bart W. Édes, Director of the Asian Development Bank's (ADB) Social Development, Governance, and Gender Division. Mr. Édes manages a division providing quality assurance, policy guidance, and technical advice to ADB operations in the following areas: civil society engagement; capacity building; anti-corruption, governance and public management, and ICT for development; inclusive business, poverty and social analysis; and youth engagement, and social protection and labor in developing Asia and the Pacific. In previous assignments, Mr. Édes oversaw ADB work on disaster risk management, education, and health. He also led development of ADB's Public Communications Policy, which set a new global benchmark for transparency and information sharing among the international financial institutions. Between 1994 and 2000, Mr. Édes managed communications at SIGMA, a joint initiative of the European Union and the OECD providing support on public governance reform to European countries in transition. In earlier roles, Mr. Édes has worked as a journalist, policy analyst, and specialist on international trade and foreign direct investment. He has a Master's Degree in Public Policy from the University of Michigan and a Bachelor's Degree in Government (cum laude) from Georgetown University.

PANELISTS

Jong-Han Kim, Director of the Resident Service Division, Ministry of Government Administration and Home Affairs (MOGAHA), Korea. Mr. Kim is in charge of managing the overall resident registration system and registration information system. Prior to this position, Kim served as Director of Community Credit Cooperatives Support Department of MOGAHA, overseeing policymaking decisions and operations. Before that he was Director of the High-tech Industry Bureau and Vice-Mayor of Suseong-gu and Daegu City. Mr. Kim holds a Bachelor's Degree and a Master's Degree in Public Administration from Kyungpook National University, South Korea.

Raj Mitra, Chief, Demographic and Social Statistics Section, UN Economic Commission for Africa (UNECA). At UNECA, Mr. Mitra leads a continental program on Civil Registration and Vital Statistics (CRVS) and coordinating programs on Population and Housing Census, Gender Statistics, and Statistics on Development Indicators. Prior to joining UNECA, he was the Planning, Monitoring and Evaluation Specialist at UNICEF India, where he made significant contributions to the revamping of India's CRVS system and the 2001 Census. He began his career in the Indian Statistical Service in 1981, where he managed field statistical activities. During his 25 years of service to the Indian Government, he held a number of senior positions, including Head of the Civil Registration Division and Head of the Census Division in the Office of the Registrar General, and Census Commissioner.

Cornelius Williams, Regional Child Protection Adviser, UNICEF Eastern and Southern Africa Region. Mr. Williams has over 25 years of experience managing child protection programs in Western, Eastern, and Southern Africa with UNICEF and Save the Children. As Regional Adviser, he works with the 21 UNICEF Country Offices in East and South Africa on the design of child protection programs, including interventions for the improvement of birth registration and civil registration. He has played a leading role in coordinating UNICEF's engagement with governments and other partners in the national strategic planning process recommended by African Ministers Responsible for Civil Registration and Vital Statistics. He is a member of the coordinating body for the Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics. Mr. Williams holds a Master's Degree in International Child Welfare from the University of East Anglia, United Kingdom.

Mokhlesur Rahman, Additional Secretary, Election Commission, Bangladesh. Prior to this position, Mr. Rahman served as Additional Division Commissioner in the Division Commissioner's Office in Dhaka and in the Ministry of Public Administration. He has also held various positions at the central and local government levels in Bangladesh, including chief executive officer at the Khulna City Cooperation.

Mia Harbitz, Lead Specialist, Identity Management and Registries, Inter-American Development Bank. Ms. Harbitz has over 25 years of experience in the design and execution of development projects. Since 2004 she has been coordinating IDB's activities in the area of identity management, including a series of studies assessing the practical implications of under-registration of citizens in Latin America. She has designed and managed several projects aimed at modernizing and strengthening the capacities of civil and identification registries in Latin America, improving the quality of national vital statistics systems, and promoting universal birth registration and civil identification. Ms. Harbitz has a background in engineering, and prior to coming to Latin America in 1991, she worked in development programs in East Africa and the Middle East.

INTRODUCTION

Bart W. Édes, chair of the session, outlined the array of policy issues that countries must consider when introducing a national identification (ID) system. Among them are the policy implications of linking the national ID system with civil registration; legal issues related to privacy, security and the use of biometrics; and the policy implications of the linkage between public, legal registries and private, administrative registries.

DISCUSSION

Jong-Han Kim, Director of the Resident Service Division, Ministry of Government Administration and Home Affairs, Korea, described the design of the Resident Registration System and the information system in South Korea. Resident registration information is essential to all government operations, including taxation, education, and elections. Because of its important function, a responsible institution must manage resident registration information in an integrated and secure way. The purposes of the Resident Registration System of South Korea are to gather information about the residences of citizens and the movement of the population in order to maintain secure public order; to support administrative tasks, such as the collection of population statistics, issuing passports, and administering taxation; and to ensure the exercise of citizen's rights and social welfare.

The Resident Registration Act of South Korea as the foundation for the Resident Registration System went into effect in 1962. Digitization of the system began in 1985, and presently the entire system is digital. Since 1995, all services have been provided online.

Everyone is registered at birth. Changes of address must be reported to the town administrative office of the appropriate district. The person's full name, date of birth, the head of household, and address must be reported within 14 days after a change of address or 30 days after a birth. The Resident Registration System assigns citizens 13-digit resident registration numbers.

The Resident Registration Information Management System of South Korea includes the Ministry of Government Administration and Home Affairs (MOGAHA)—previously known as the Ministry of Security and Public Administration (MOSPA)—the metropolitan, provincial, city, district, and borough governments, and township or local governments. Resident registration information is received in 3500 township government offices, which maintain and manage the records and issue certification documents. The 230 higher-level governments manage the appropriate resident registration system and issue certain certifications. Provincial and metropolitan city governments direct and manage the regional resident registration system. Finally, MOGAHA's Resident Registration Electronic Data Center provides integrated management and operation of national resident registration information.

Information technology is needed to systematically and securely manage the resident registration information that is essential to the operation of the national government and the development of electronic data. The government pools resident registration information in the MOGAHA and, through the shared administrative information system, regularly reports to national government agencies such as the National Tax Service, the Military Manpower Administration, and the Ministry of Labor. There is direct connection to the 24-hour automated civil complaint line, passport issuing system, and immigration office updates data in real time.

Once a citizen reaches the age of 17, he or she must apply for a national identity card in a local government office. After the data are registered in the system, they are transferred online to Korea Minting and Security Printing Corporation (KOMSPCO), which produces the ID cards and sends them to the local government. It takes about one week from the date of application for the national ID card to be issued. The national ID card provides proof that the citizen is legally an adult and is used to verify identity. The current national ID cards, made of PVC material, contain the person's name, photograph, address, and resident registration number, details on change of address, and a fingerprint.

Mr. Kim emphasized that a resident registration system could be a driving force for economic and social development in developing countries. Countries can decide the most appropriate targets for services in a variety of areas, such as social welfare, taxation, education, and customized services to professional corporations. Computerization saves tons of paper and makes eco-friendly civil administration possible. Finally, all of these beneficial effects will help developing countries raise their international competitiveness.

Raj Mitra, Chief, Demographic and Social Statistics Section, UN Economic Commission for Africa (UNECA), stressed that civil registration must be linked to the national ID system in order to provide a secure legal identity. He noted that in many African countries, the national ID and the civil registry systems are still two distinct and separate systems. It is not enough to claim that everyone has a right to identity if that identity cannot be guaranteed. National ID alone is not sufficient to guarantee identity, because civil registration is the foundation of the national ID system. Civil registration provides legal breeder documents.

He stressed the importance of treating civil registration and national ID as subsystems of a single system. Conceptually, legal identity begins at birth, with biographic information collected through the civil registration system. Secure identity is strengthened with the biometric information collected through national ID systems. Identity ends at death, but its legal effects do not end there. Thus, death information collected through civil registration must also be linked to the national ID system. Much of the literature omits death in the discussion of what constitutions registration. Death registration is also crucial to maintaining a good national ID system.

With respect to policy, Mr. Mitra advocated for one policy on civil registration plus national ID, with a clear statement of purpose. Secondly, laws on national ID should be passed that provide for linkages between civil registration and national ID. Finally, governments should coordinate exchanges between the two systems.

Mr. Mitra stressed the need to simplify processes to improve access and to choose appropriate technologies to ensure interoperability. Efficient management is also needed in order to offer better services for citizens, including through e-government.

The Africa Program on Accelerated Improvement of Civil Registration and Vital Statistics (APAI-CRVS), which runs under the policy guidance of the African Ministers responsible for civil registration, must clearly articulate the importance of linkage between civil registration and national ID. The ministers who participate in the Ministerial Conference on Civil Registration are not necessarily the same ministers who are responsible for national ID. Some come from ministries of justice, others come from ministries of health, and national ID typically falls under the Ministry of Home Affairs or Internal Security. He called for a clear strategy of advocacy on civil registration plus national ID in order to reach beyond the CRVS constituency. He also stressed the importance of ensuring that civil registration systems are built on interoperable platforms.

Most African countries face a number of challenges in rolling out civil registration plus national ID. The first challenge is that in some countries, civil registration and national ID are at different stages of development, with civil registration generally at a lower stage. In some countries, the national ID system is well funded and uses high-end technology, while civil registration remains "people-based." Second, the two are not linked or only loosely linked, and not linked from birth. There are also institutional challenges; specifically, the two functions are housed in different ministries or in the same ministries but different departments. There are challenges of interoperability when the two systems use different technology and different platforms. Policies or laws linking the two

systems are often lacking. There are capacity challenges. National ID has more political and donor support than civil registration, and there is no international guidance manual available on integrating civil registration and national ID.

Other important issues that need to be resolved include whether the national ID database should be used for other purposes beyond securing identity, such as for election lists or social grants; the implications for design of the system; whether the national ID database should include addresses or location of the residence of individuals; and how variables can be updated and whether addresses should be updated when the appropriate infrastructure to do so is not available.

He concluded by saying that secured identity involves more than just technology or biometrics. Identity management should take a comprehensive approach. Integrating civil registration and national ID will go a long way to strengthening what he called the "the weakest link in the chain."

Cornelius Williams, Regional Advisor for Child Protection, UNICEF, Eastern and Southern Africa, discussed the status of CRVS, especially birth registration, and advocated a pathway and a sequencing of ID management from civil registration to the development of an ID. He noted that over 230 million children are unregistered globally, and of those who are registered, birth registration only grew about 45 to 53 percent in Africa. Ninety percent of the growth came from five countries: Nigeria, South Africa, Uganda, Niger, and Tanzania. Two out of three countries in Africa have stagnating birth registration, and in some cases, there is a decline either because of conflict or fragility. Only 16 countries report basic vital statistics.

Moreover, only two out of three countries are introducing or upgrading their ID systems. Elections are being held regularly, and the use of biometrics is becoming common. It is questionable whether biometric voter registration can be successful when civil registration, which provides breeder documents, is less developed.

In South Africa, the footprint for civil registration is extensive, but the footprint for ID management and identity documents is found in only one in five of those civil registration offices. This is problematic because it raises questions about the capacity to issue IDs without the requisite Internet connectivity, hardware, training, and security. Civil registration is all about relationships—among families, and between the citizens and the State. In ID systems, however, the only relationship is the one between the citizen—the owner of the ID—and the government. An ID system cannot know if a person is dead; that is left to civil registration. South Africa's experience has shown that civil registration systems that have the appropriate infrastructure in place can build an effective ID system.

Mr. Williams discussed the important role played by the health sector. In some countries, the ID system is quite politicized. In a hospital setting, however, a linkage can be made between civil registration, birth registration, and delivery in a politically neutral environment.

With respect to investment, Mr. Williams noted that the investment required for civil registration is roughly US$4 per capita. Elections cost US$5 per capita, 60 percent of which covers the cost of voter registration. Election observation missions are increasingly recommending biometrics to increase voter registration rates. Still, civil

registration remains at a rudimentary stage. Historically, Africans were not required to register; in Malawi, for example, only the colonialists were required to register. To date, they have not completely turned this situation around, although the experience of South Africa proves that where there is political will, it is possible to institute an effective civil registration system.

The cost of national ID, in South Africa, for example, is US$9 per capita. In Kenya, voter registration was very expensive, but if they had registered voters using the civil registration system, it would have been as cheap as it is in Germany. Once again, in South Africa, political will increased voter registration from 30 percent to 90 percent. Service points were established, as were incentives for registration, and interoperability was addressed. South Africa recently launched an award-winning smart ID system. It is being introduced over an eight-year period, and it is building on the population database and the infrastructure that was set by civil registration. It is housed in a single ministry.

Donors and academics are encouraging the biometric pathway so that African countries can "leapfrog" the technology. The ID pathway is prohibitively expensive and could bring political instability. There is an African integration agenda that is encouraging Africans to move from one country to another, and there are doubts about the integrity of their ID system.

Mr. Williams concluded by commenting on sequencing. He explained that if a country's biometric voter registration system predates the completeness of its civil registration data, then it will have to draw upon data from biometrics, from the ID system. He quoted UN Secretary-General Ban Ki-Moon, who observed that "... some of the poorest countries in the world have chosen some of the most expensive electoral processes and technology..." adding that this is true not only for elections, but also for the national ID.

Mokhlesur Rahman, Additional Secretary at the Bangladesh Election Commission, said that today, national identification is not the great need in Bangladesh that it once was, but it was difficult to institute. Both developing and developed countries struggle with two types of national identity problems: having no standard means of identity for citizens, and having more than one ID card. Bangladesh, which is considered a technologically backward country by international standards, uncharacteristically suffers from the latter because a variety of government agencies allow various forms of identification, ranging from bar registration numbers to national ID. Voter ID is currently available to citizens 18 years of age and over, which constitutes Bangladesh's voter list. Other ID numbers include primary and secondary students' ID numbers, tax ID numbers, and various ID numbers for government subsidies, such as elder allowances, widows' allowances, and others.

Mr. Rahman discussed the whole-of-government efforts taken by the Government of Bangladesh to standardize citizen ID by aligning the different and often divergent ID cards of the various ministries. The government believes that a unique ID number is relevant for service delivery, especially those services delivered electronically. In Bangladesh, the police department, educational institutions, birth registries, and the health sector all issue distinct IDs. In 2008, the government prepared an electoral roll of 90 million voters. Because social security, banks, tax administration

and other departments have their own registration, a unique identification system is needed to coordinate among these departments.

One problem with IDs is that while some countries have no ID cards, others issue more than one ID. The larger problem is that having multiple citizen ID systems creates conflicts between organizations, and duplication of efforts in data collection and maintenance by different organizations is a waste of money and resources. Divergent systems make it difficult to share data; hence, the government does not know who is getting which services.

Bangladesh is a densely populated country of 160 million people. Ninety percent of voters have registered with the Ministry of Local Government and with the Election Commission of Bangladesh. The Ministry of Health also conducts a health census. Coordination among these various departments is essential. This is especially important between local governments and the Election Commission, because local governments have conducted nearly 100 percent of the voter registration, but the Election Commission holds the electoral rolls. CRVS is necessary for various departments and ministries, such as the Ministries of Justice, Home Affairs, Health, Local Government and Agriculture, Education, Social Safety Net, and the Statistics Department. Coordination is needed among these ministries and the Prime Minister's Office and Cabinet Division, through the "access to information" program.

Mr. Rahman touched on four policy issues regarding IDs: first, coordination from the Prime Minister's Office and Cabinet Division, which retain control of the ministries; second, the need for effective linkage to services delivery from birth to death of a citizen by building in incentives to use the standardized ID and making updating as easy as possible; third, the biometrics chosen should be feasible and cost-effective in the socioeconomic context of a resource-strapped country like Bangladesh; and fourth, information security and personal privacy issues need to be addressed. To protect privacy, in 2010, a law entitled Identification Registration Act 2010 was passed.

Bangladesh is attempting to interconnect its efforts in the various ministries. There are plans to expand rapid connectivity to virtually 100 percent 2G coverage and rapid 3G, WiMax and fiber expansions.

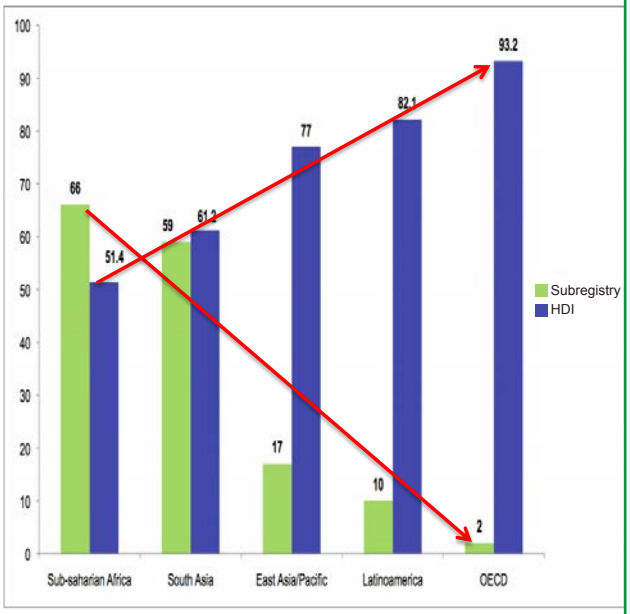
With respect to organization at the grassroots level, Bangladesh has 6,000 local government institutions, 75,000 health workers, and 13,000 community clinics—one for every 6,000 people.

The legal framework for CRVS includes the National ID Act, the 2004 Birth and Death Act, and the Health Policy and Statistics Act.

It is vital to link the various departments that provide services associated with vital life events, including but not limited to birth, death, immunization, education, marriage, separation/divorce, adoption, migration, and taxation. Currently, the Ministry of Local Government is carrying out the first two functions. Death and immunization registration fall under the Ministry of Health. Marriage, separation/divorce, and adoption fall within the purview of the Ministry of Justice. The Ministry of Education and Primary Education oversees education. Migration falls under the Ministry of Home Affairs, and taxation is the responsibility of the Board of Revenue, which is a department of the Ministry of Finance.

Under-registration is an impediment to economic development

- Building social capacity is necessary for social mobility.
- Social mobility is fundamental for economic stability.
- Under and late registration of births continues to be a serious problems. Under-registation rates are reduced substantially after age 5.
- Significant gaps in health and education persist among children without birth certificates.



IDB Institutions for People

Today, biometrics is restricted to photographs and fingerprints of forefingers. In the near future, the government will add iris and palm prints if necessary. Biometrics is necessary for unique ID in order to be able to identify unclaimed dead bodies and to avoid falsification of identity for child marriage, jobs, and migration purposes. Selecting the right biometrics will also help reduce duplication, waste, inaccuracies, and inconsistencies. Currently, nearly US$100 million is spent on citizen surveys administered by the Health, Local Government, and other ministries. These efforts need to be coordinated in order to ensure that programs are cost-effective, low-maintenance, and usable by grassroots workers with low ICT skills and low-speed connectivity.

Information security is an emerging field globally, with personal privacy concerns being expressed at the highest levels of government and civil society. Since the national ID now covers 90 million people, a law has been enacted which ensures the privacy of all those whose names have been registered.

Mia Harbitz, Lead Specialist for Registries at the Inter-American Development Bank, discussed the human rights and governance aspects of

identity management, or the need to balance the "right to be" with the "right to know." She defined identity management as the system or the combination of systems, rules, and procedures that govern the relationship between individuals and organizations regarding the entitlement, use, and protection of personal information. In discussing identity policies, what is being addressed is the "right to be"—that is, the right to a name, a nationality, and the right to a legal, secure, unique identity that the government needs to know. The governance aspect concerns the fact that governments needs to know how many people there are, where they are, what countries do with their civil registration systems, their population registry, and the need for the registry to be linked to a legal identification system.

At the same time, in this day and age, when verification of documents and authentication of identities are so prevalent, it is important to be aware of those who have a "desire to know." This includes surveillance for the right to protection, and what September 11, 2001 (9/11), triggered with regard to identity management. She posed the questions, "Are we comfortable with possible function creep? Who defines what is a fair use of our personal information?" She called for discussion of the need to give consent, given the desire on the part of institutions, organizations, and private entities to know many details about people for various purposes. She also raised the issue of e-identities, that is, personal information voluntarily given out online to obtain some benefit or service, and mobile identities, which enable organizations to track people's personal information, preferences, and whereabouts.

It all starts with birth registration. Under-registration, or even late registration, that is, birth registration that takes place outside of the time limits established by the legal framework of any given country, is an impediment to economic and social development. Crossing data from UNICEF with the Human Development Index reveals that the countries with the highest birth registration rates also have the highest scores on the Human Development Index. Progress has been made in Latin America, but there is still a long way to go to close the gap.

The reality of global and national identity assurance is that the need to prove one's identity is becoming necessary in a number of contexts, combined with a need for accurate and timely demographic information. One of the drivers of this new reality was 9/11 in the United States. Another driver is the creation of chip-based debit and credit cards in place of the metallic strip, to make the cards more secure. Still another driver prompting countries to develop national identity policies is the post-2015 development agenda. Furthermore, by November 2015, UN member countries will be issuing machine-readable travel documents (MRTD) and passports, a scheme that relies on the veracity of the breeder documents.

How can countries reach the level of identity assurance that is being required internationally? Through the IDB's projects in Latin America since 2000 designed to improve civil registries in Latin America, six considerations for developing identity policies have emerged that will support a secure management of identity.

The first is communication. Public sector decision making needs to be based on accurate information, because ill-informed decisions can be very costly economically and politically. The

second is provision of the appropriate legal framework. Some of the frameworks that govern identity, civil registration, and civil identification are outdated. Third is fixing the severe institutional asymmetries. Civil registries, at least in Latin America, are public institutions that for the most part have been left to their own devices, and not enough investment has been made to improve them. Fourth, standardization is important, both in managing processes and managing inter-institutional relationships, inter-connectivity, and interoperability. Fifth, strong attributes that are unique and legal are needed to secure identity. Finally, ICT must be employed. Too often, however, ICT solutions have been either technology- or vendor-driven, with unfortunate consequences for countries. While there have been improvements in the administration of civil registration and the quality and timeliness of the services provided, many challenges must be addressed before civil registration can be universal, secure, and timely.

In conclusion, Ms. Harbitz noted that there are still many questions to be answered. There is a need for a paradigm debate to discuss the next steps and how the management of civil registration and civil identification registries can be improved in the member nations of the three regional development banks. She stressed the need to promote a rights-based identity management model, especially in light of the post 2015 sustainable development goal to "leave no one behind," and avoid purely technology-driven solutions. Technologies move very fast, policies move very slowly, legislation moves even more slowly. Those who design policies do not always understand technology, and those who draft laws rarely understand technology. Thus, there is much work ahead.

QUESTIONS AND ANSWERS

In response to a question on how the digital divide between countries could be closed, a panelist said that looking to technology for easy solutions may not always be the best way to go. In many Latin American countries, people lack electricity and Internet connectivity. Before countries invest in expensive, sophisticated technology solutions, there is a lot of homework to be done on a more grassroots level. There is no one solution that fits all situations. It will be interesting to see how mobile technology can be used in the service of registration, with the caveat of the need for secure transmission and management of data.

A question was asked about whether Koreans, who must register within 14 days of changing their addresses, must do so in person or they can do so online. It was replied that there are two ways to accomplish this—the traditional way, where the citizen visits the local government office to directly notify the government, or by using the so-called "Minwon 24," an online portal system set up by the national government.

A panelist was asked to elaborate on his statement that the national ID system does not tend to have the same political support as civil registration, and to explain how political support for civil registration could be strengthened. He replied that in some African countries, national ID systems have been successful because they were country-led but donor-driven, technology companies provided attractive solutions, and there was money to fund the effort. The national ID system took off following the 2010 Conference of Ministers. Moreover, many African countries are linking civil registration and

national ID, particularly when they fall under the jurisdiction of the same ministry, department, or director. But in those countries where these two are in different ministries, such as Ethiopia, this is not occurring. He stressed the importance of advocating for a single system with those civil registration ministers who are not national ID ministers. This is the case in 12 to 15 countries. In some countries, although the law is the same and the ministry is the same, they are moving in different directions, because one entity has money to support national ID but not civil registration. Communication is important. The next Conference of Ministers will issue a position paper on linkages of civil registration and national ID to highlight these issues.

A panelist was asked whether Bangladesh had looked to other examples from other countries within or outside the region for inspiration as it developed its own national ID. The panelist explained that with respect to the national ID, the Bangladesh Election Commission prepared an electoral roll in 2008 with photographs. Now, the government has asked the Election Commission of Bangladesh to prepare a smart ID card. It has undertaken projects assisted by the World Bank amounting to US$195 million, and by 2016, 92 million smart ID cards will be distributed to citizens 18 years and older. After 2016, smart ID cards will be provided to citizens under 18.

A question was asked about what lessons South Africa could provide to other countries, given its remarkable progress in civil registration. The panelist explained that South Africa set both public and private incentives. One of the public incentives was the political commitment of the government. Before Apartheid was overturned, most Africans were not registered, so being counted as a citizen was a political good for the government. An example of a private incentive was the requirement of a birth certificate to receive child grants. Funeral homes that did not request a death certificate for the deceased before burial could be deregistered. A further incentive was the infrastructure and ensuring that it was adequately resourced.

A participant asked about digital identity understood as the means by which people can be identified both in person and in cyberspace. A panelist replied that South Korea has not yet digitized the authentication of identity. Specifically, in the computerization process it has attempted to introduce electronic national ID cards. However, opponents of the electronic ID card pointed to problems in the area of personal information protection. Verification of identities is partially being done online, but it has not been expanded to smartphones. Although these methods feel more efficient than other methods, the matter that must be resolved before deciding to introduce them is whether they guarantee personal information protection. Countries need guarantees on this issue before progressing with digital verification of identity.

A panelist noted the lack of consistency between civil registration and national ID data in countries where civil registration was set up before national ID. He asked what needs to happen when a new system is set up to match both civil registration and identification. He asked if the separate databases in Bangladesh for births, civil registration, identification, electoral commissions, and health were consistent. A panelist replied that using the population database, and then having a single database that can synchronize the ID and birth registration with civil registration, is helpful.

Another panelist said that there were no guidance documents available on how to synchronize the two. A national ID database cannot be created from civil registration: either the national ID database has to be created in one go, such as what is occurring in Lesotho through a full-fledged, one-year program on registering every single person. In countries that have systems at different levels of development, there is a need for synchronization. Namibia and Botswana have excellent systems of national ID and civil registration with Synchronization. Every child who is born in one of those countries receives a national ID number, and the parents' IDs are part of the database of the child's ID. Biometrics are added when the child reaches the age of 16.

A participant asked whether in countries where there are many cultures, languages and ethnicities, ID documents should be printed in the languages of these ethnicities. A panelist called for caution with respect to what information is collected for civil registration. It is a tool that, in the wrong hands, could potentially be used to control the population, and a rogue government could use it for nefarious purposes.

A panelist asked about the performance metrics that should be included for biometric identification systems. She added that technology is not infallible, as it can turn up both false positives and false negatives, and people may have difficulty disproving the results. She also asked about the advisability of using DNA to identify small children, since biometrics cannot be used with them, and about the ethical issues involved in doing so. A panelist agreed that biometrics is not infallible, and in some countries it is also very difficult to collect. Many countries are using unique ID numbers as starters, whether intelligent or not intelligent, sequential or not sequential. It is important to consider very carefully the legal, ethical, and moral aspects of using biometrics. She added that the use of DNA in civil identification will be a slippery slope. It has been tried in some countries for convicted criminals, such as the United States and in Chile. However, children cannot give consent. The information collected could cause them harm or exclusion from insurance coverage later in life. Recent studies on the use of biometrics for children are inconclusive. It is not practical. One way to identify children that is being considered in countries that already use unique identity numbers is that, when a child is born, they try to create an algorithm using the parents' ID numbers to create the child's ID number. As for the uniqueness of biometrics or photos, it is very difficult up to a certain age to have good identification and authentication results. Uruguay uses ID cards from birth with a photo, but it is also tied to the parents. Another participant said that in children under 10, other biometric features, such as iris and palm print, are preferable. Or, it would be better to prepare smart ID cards along with biometrics.

Key Lessons and Recommendations

- Linking civil registration with the national identification system is the foundation of a secure legal identity for every person. Countries should pass laws that provide for interoperability between civil registration and national ID. The government should facilitate and coordinate exchanges between the two systems.
- A population or resident registration system could be a model for economic and social development in developing countries. Countries can use it to target services in a variety of areas, such as social welfare, taxation, education, and customized services to professional corporations.
- Digitization of records is fundamental for the efficient administration and management of civil registries.
- Before authentication of identity can be done digitally, there must be legal guarantees that privacy will be protected.
- It is cheaper and more cost-effective to perfect a country's civil registration system first, before attempting to use the data for purposes such as identification and voter registration.
- Because biometric information on children is difficult to collect and not infallible, it is advisable to create algorithms using unique ID numbers that are linked to their parents' ID.
- Countries that hope to make rapid progress in civil registration should define and offer incentives both to the population and to the public and private sectors to ensure uptake and recognition of certificates.
- Identification documents should not include the bearers' ethnicity, in order to avoid the potential for abuse by governments or other third parties.

SESSION 3

Universal Birth and Death Registration for Secure Identity System: Understanding The Business

The business process of issuing secure identity documents for citizens starts with birth registration. The session discussed the business aspects and standards of identity management, including their conceptual, technical, institutional, and governance requirements and implications.

CHAIR

Charles Lufumpa, Director, Statistics Department, African Development Bank (AfDB). Mr. Lufumpa joined the AfDB in March 1992 as a Senior Economist-Statistician in the Central Projects Department responsible for formulating and analyzing policies and strategies for poverty reduction, environmental economic issues as well as coordinating the lending program. In January 1996, he moved to the Strategic Planning, Policy, and Research Department where he served in the same capacity until his appointment as Manager in the Statistics Division in 1997, a position he held until his appointment in his current position in March 2007.

PANELISTS

Jae-Kwang Kim, Professor, Department of Law, Sun Moon University, Korea. Dr. Kim served as Research Fellow of the Korea Legislation Research Institute and participated in drafting the Personal Information Protection Act and the e-Government Act. Currently, he serves as Vice President of the Personal Information Protection Law Association, Vice President of the Korean Cyber Security Law and Policy Association, and Vice President of the Korean Comparative Public Law Association.

Neo Lepang, Director, Department of Civil and National Registration, Ministry of Labor and Home Affairs and Registrar of Births and Deaths, Births and Deaths Registry, Botswana. Ms. Lepang has held a variety of posts in public service. In addition to her current positions, she was Hansar Editor with the Botswana Parliament and served as the Senior Education, Information, and Communication Officer in the Botswana Independent Electoral Commission. She has served in the Ministry of Labor in various capacities, including Principal Youth Officer, Assistant Director Ministry Management, and Assistant Director, Immigration and Citizenship. Ms. Lepang holds a Master's Degree in Public Administration from the Centre for Specialization in Public Administration and Management, University of Botswana. She is currently pursuing a Postgraduate Certificate in Enterprise Risk Management.

Alvin T. Onaka, State Registrar of Vital Statistics and Chief, Office of Health Status Monitoring, Hawaii State Department of Health, United States of America. Dr. Onaka has held this position since 1989. From 1974 to 1981 he worked for the U.S. Agency for International Development in Washington, DC, where he managed population and health projects in Latin America, Africa, and Asia. He served as chair of the U.S. Death Certificate Revision Committee and has been an advisor to the National Death Index of the National Center for Health Statistics. In 2003, Dr. Onaka was appointed to the Board of Scientific Counselors, National Center for Health on Statistics of the Centers for Disease Control and Prevention (CDC) where he consults civil registration and vital statistics projects in Africa and the Asia-Pacific region. He served on the executive committee of the National Association for Public Health Statistics and Information Systems for 10 years and completed a two-year term as its president in 2004. In 2005, Dr. Onaka was invited to participate in a Federal-State Working Group on Electronic Vital Statistics Systems and National Security to implement the Intelligence Reform and Terrorism Prevention Act of 2004. Dr. Onaka holds a Ph.D. in Demography from the University of Massachusetts at Amherst.

Iván Guerra Brugiati, National Director, Civil Registry, Panama. Since 2007, Mr. Guerra Brugiati's work has been based in the electoral court. He has been an international observer in local elections in El Salvador and he has been a panelist at the VIII Ibero-American Congress on Administrative Law, the Regional Meeting of Civil Registries, and the VI Vital Statistics Council Meeting of Latin American and the Caribbean in Colombia. In 2011, he was a panelist at the International Meeting on Migration for America and the Regional Workshop on Statelessness. In 2012, he represented Panama at the IV meeting of the Latin American Council of Civil Registries, Identification, and Vital Statistics (Consejo Latinoamericano de Registros Civiles, Identificación y Estadísticas Vitales, or CLARCIEV). Mr. Guerra holds a Bachelor's Degree in Law and Political Sciences and a Master's Degree in Private Law.

INTRODUCTION

Charles Lufumpa, Director of the Statistics Department at the African Development Bank, introduced the session by explaining that its purpose is to clarify the business processes and business standards that need to be applied in order to have effective universal registration systems and to ensure secure identity systems. He introduced the panelists, all of whom have considerable experience in the area of business processes of universal birth and death registration in their respective countries.

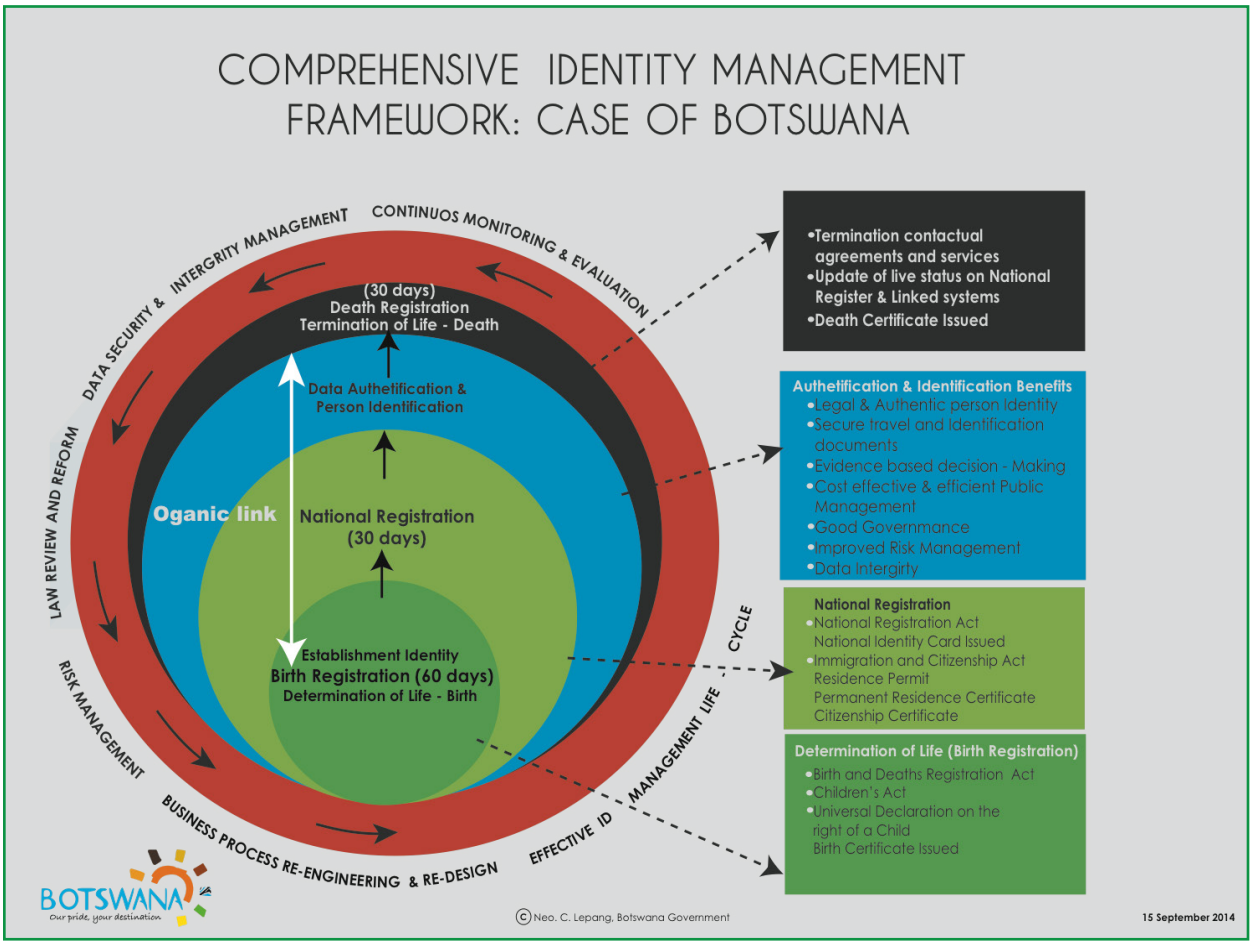
DISCUSSION

Dr. Jae Kwang Kim, Professor of Law at Sun Moon University, provided an overview of the business aspects of the Resident Information System of South Korea. He began by noting the two main laws governing South Korea's Resident Information System: the Resident Registration Act, which mandates registration of citizens and requires accurate records to be kept of residency status and movement of the population; and the Family Relations Registration Law, which requires registration of all births, marriages, deaths, and specific information regarding these events.

Dr. Kim explained the business law underpinning the Resident Information System and the business utilization of resident registration numbers, which comprise the core of the Resident Information System. Resident registration data was first digitalized in May 1985, and by June 1986, resident registration data of all citizens—52 million records—had been entered into the computerized database. Since February 1995, citizens anywhere in the country can be issued a resident registration abstract via an online system. He noted that the abuse of resident registration numbers has become a crucial issue in the debate regarding personal information protection.

He then briefly outlined how the Resident Registration Information System functions. A management as well as an operating system back the Resident Registration service centers. That is, each local government is charged with operating the system for the provision of identification services for citizens in cities, boroughs, and counties through the Resident Registration Digitalization and Information Center. The Resident Registration Information System provides services related to the well being of citizens. The Resident Registration Digitalization and Information Center is composed of the Resident Registration Digitalization and Information System, the Resident Registration Shared Usage System, and the Resident Registration Data Usage System. The Resident Registration Digitalization and Information System complies with the uniform standards of national resident registration data with respect to identity cards and population statistics. The Resident Registration Shared Usage System provides resident registration information as specifically required by public institutions. The Resident Registration Data Usage System also provides the resident registration data specifically required for self-governing local governments and their appropriate ministries.

With respect to the business aspects of the Resident Registration Information, Dr. Kim explained that the System uses IT technology to open new markets for public services. IT improves the quality of public services, including accuracy and efficiency, and provides new vitality for public services. The institutions utilizing the Resident Registration Information System share the data with public institutions. Many institutions



are participating in order to promote transparent public administration. By organically utilizing one open system, the government is providing a one-stop service for the enrollment and use of digitized data. The Resident Registration data serves to identify and verify the user of the administrative data center's services, and as basic evidence for data processing it is utilized in elementary steps of the provision of services of administrations of national and regional government. The items needing verification are the applicant, the reporter, their relationship, and the bonds, liabilities, securities, and all economic activities of the citizens.

Ms. Neo Lepang, Director, Department of Civil and National Registration, Ministry of Labor and Home Affairs and Registrar of Births and Deaths, Botswana, introduced her remarks by noting the nearly 100-year history of civil registration in Botswana. Civil registration began in 1918, and enrollment in national (identification) registration began in 1986. She underscored the government's commitment to ensuring that everyone has a legal identity, which is a precondition for full citizenship. The legal framework of civil registration is modeled on UN principles. In addition to mandatory registration, the government is aiming for full coverage. The country

was at 72 percent in 2007, and is likely around 80 percent coverage at present. Botswana's registrations are time-bound, continuous, and permanent, and the government ensures confidentiality, although data protection laws have not yet been adopted.

Ms. Lepang explained the flow of the civil registration process in Botswana. An ID card is issued with a unique ID number in accordance with the National Registration Act. All Botswanan citizens or anyone who acquires Botswanan citizenship must have their registration within 30 days of their 16th birthday. Since 2003, both civil registration and national registration have been organized under a single director. This has advantages in terms of synchronization of processes, decision-making, and resourcing. As a result, an organic link between the two is established wherein in order to register for national registration, one must have registered the birth by law.

Moreover, as a way of motivating registration of births, on-site registration centers have been set up at most health facilities, and a project is underway to establish them at all health facilities. This project ensures that upon the birth of a child, the birth is registered and a certificate issued right then and there, with a unique ID number, requested from the ID system. Birth registration is based on the Birth and Death Registration Act, used together with the Children's Act, which indicates that a child is registered after their birth as a right.

Based on these acts, the birth certificate is issued. At age 16, the national registration card is issued, and a photo and biometrics are collected. This is the way that the national registration is used to authenticate identity throughout a person's life, "from cradle to grave." The ID is used for access to services, such as salary payments, access to social grants, and issuance of passports. No one can be issued a passport if they do not appear in either the birth or the national registration systems.

The moment that a death occurs, death registration is authorized with the click of a button, which provides a real-time update of the status of the person. Since the birth and death registration and national identification systems are synchronized, the moment the death certificate is issued, the national identification system updates the status of a person from alive to dead, and onward to other government systems, which all receive the same information. Among the benefits derived from this synchronization are fraud prevention, prevention of "ghost employees," and termination of all the rights that would have been granted a person while alive immediately upon their death.

With respect to security, Ms. Lepang said that in a system such as this one, there must be integrity in the management of a life cycle of an identity—from birth up to the end of life and acknowledgement of its termination. It is also vital to ensure that the ID management infrastructure is robust, so that the public can have confidence that the ID itself is real.

Lastly, robust infrastructure, or the way that the process is managed, must have the required resources assigned, so that the supply side from the government is properly managed. Demand must also be motivated by linking ID management to key services such that people can see the need to come forth and register. This is the

only way that the integrity of the system can be guaranteed.

For all of the foregoing to function properly, laws must be in place that will be able to manage and protect personal data. There is need to ensure that there is security attached to all this, also in terms of electronic signature laws. Data protection and privacy is key to garnering the necessary confidence from users and those providing services alike. Risk engineering and risk management are key business processes that underpin security. Botswana is striving to put all of these processes in place.

"Registration of birth and death is a government responsibility," said Alvin Onaka, State Registrar of Vital Statistics and Chief, Office of Health Status Monitoring, Hawaii State Department of Health. "It should not be left to the parents or to the families to establish the identity." He added that complete, accurate and timely registration allows the national government to establish and to manage the identity of individuals at the starting point—at birth—and at the end point—at death.

Dr. Onaka illustrated the business processes of birth registry using the example of President Obama's birth certificate, which was a point of controversy during the electoral campaign leading to the President's election in 2008. He added that the business processes and the laws that govern birth registration in Hawaii are standard in all 50 states of the United States.

He explained that the starting point of an identity is the birth certificate. A unique number is given to every birth. The President's birth certificate can be found in Volume 10, on page 641. It is paper-based. In addition to the identity of the individual—Barack Hussein Obama II, male, it indicates his date, time and place of birth, the name, age, and birthplace of his father and of his mother, the name of the medical doctor who attended the birth, and the name of the local registrar at the time, and the certification of the state registrar at the time.

Dr. Onaka raised this issue to demonstrate that there is a wealth of information on the registration of the birth to identify the child at the time of birth and that, in addition, a lot of other information is collected at the time of birth that is not shown on the certified copy. The birth record, or the registration process, the business process captured at the hospital, provides not only the prenatal information but also information regarding the live birth, and proof that it occurred in Hawaii.

Even during the era of a paper system, because of the consistency in the business processes, the mother signed the certificate three days after birth, the physician certified the birth at four days, and it was registered in the State of Hawaii four days after the birth. Despite the fact that this preceded the existence of information and communication technology (ICT), it was still a very timely observation of birth. With the introduction of ICTs, birth certificates in the State of Hawaii are now paperless and registration of births in Hawaii is as fast or faster than the registration of the President's birth in 1961.

In addition to the importance of birth registration as a starting point in the creation of identity, death registration is the end point; that is, it terminates identity of an individual. The registration of births and deaths is an essential administrative

and legal function of government, which should not be left to the parents or the family. Birth and death registration needs to be complete, timely and accurate, so the civil registration process establishes and manages the identity of individuals from the cradle to the grave.

These basic principles underlie the business practices. Using technology, information is captured at the source, for births at the hospital, or by the village administration for home births; but once the information is captured, it can be used many times, for legal and other purposes, both for identification and in the case of the President, to be eligible to run for president of the United States and other entitlements. Dr. Onaka concluded his remarks by saying that an investment in civil registration yields long-term benefits to the individual, the government, international donor organizations, civil society, and the private sector.

Mr. Iván Guerra Brugiati, National Director of Civil Registry, Panama, explained the business processes of civil registry in Panama. The Civil Registry of Panama is one of the three directorates comprising the Electoral Tribunal of Panama, with the other two being the Identity Document Directorate and Electoral Organization Directorate. The Electoral Tribunal of Panama is a separate institution from the three traditional branches of government, and it provides a guarantee of Panamanian citizenship by recording vital events and legal acts that modify people's civil status through first-hand birth registration, which provides the basis for identity documents. In Panama, aside from being the ID card number, the registration number is also used to gain access to social welfare and apply for a driver's license.

Mr. Guerra provided some statistics about Panama's population and birth registration rate. Ninety-four percent of births in Panama occur with medical assistance, and the remaining 6 percent occur in remote, inaccessible places and are recorded with the help of auxiliary registrars. Panama has five indigenous regions near its border with Colombia and Costa Rica. According to the latest census in 2010, there are 3,405,813 Panamanians, 12.2 percent of whom are indigenous and 9.2 percent Afro-Panamanians. The birth rate is 19.9 percent and the death rate is 4.6 percent. Based on the latest estimate, the under-registration rate for 2012 had dropped to 2.2 percent overall, which is 16 percentage points lower than what it was a decade ago.

Legislation passed in 2006 introduced measures that made civil registration requirements more flexible for indigenous populations. The deadline for vital events registration, including birth registration, is six months from the birth of the child if the parents fail to register the birth.

The government is striving to lower under-registration even further than the current 2.2 percent by 2015. This commitment is being carried out with assistance of international organizations such as UNICEF and the Inter-American Development Bank, as well as the Electoral Tribunal. In addition, the government is improving the measurement of under-registration by standardizing procedures with institutions that produce vital statistics for the central government. The government has built partnerships with health facilities, educational establishments, the social cabinet, the courts, and the National Statistical and Census Institute under the Comptroller General of the Republic.

In addition to the wealth of measures adopted, the government has set up new offices to increase online access and promote online registration. It has strengthened the role of auxiliary registrars, who are working in remote and inaccessible communities to register births occurring without medical assistance.

In terms of the legal aspects of vital events, a method involving the use of a unique clinical certificate is being implemented with real and statistical benefits. A reform of the law reduced the deadline for birth registration from one year to six months, and the government is attempting to reduce it to zero months, that is, for it to occur practically as soon as a child is born if the parents fail to declare the birth. Indigenous populations have the option of registering children in their native language. Measures have also been taken to promote alternative means to solve paternity disputes in ordinary courts and without having to resort to professional legal counsel.

In terms of death registration, a unique clinical certificate is also used to consolidate figures. This has real and statistical value by involving health facilities and civil registry offices as well as centralized institutions that produce these vital statistics for the government. Death registration must be done within one month. The government still faces some difficulties in this regard.

Mr. Guerra underscored the government's commitment to achieving the reduction of the under-registration in real terms by the end of 2015. One of the keys to reducing under-registration is gaining the trust and goodwill of indigenous populations in order to register them while at the same time raising awareness of the importance of registration. Thus, creating a culture of registration within the general population, and not only the indigenous population, is key.

Alliances are also crucial to combating under-registration. Mr. Guerra described an alliance with the Office of the First Lady of Panama, through which her office is undertaking a program called Early Childhood. There are agreements to implement the unique clinical certificate system with the Comptroller General as well as agreements with major hospitals to establish biometric identification to guarantee immediate registration of children and establishment of maternity affiliation, thus avoiding falsification of maternity or illegal adoptions. The Civil Registry also coordinates development programs with the Province of Darien, which borders Colombia. It has partnerships with the UN High Commissioner for Refugees and agreements with the Ministry of Social Development, which seeks to promote social programs that encourage people to register in order to exercise their rights. The procedures for civil registration have also been certified to ISO standards since 2008, having been standardized and harmonized across the country.

Mr. Guerra reviewed the challenges remaining and some opportunities, chief among them reducing under-registration to less than 2.2 percent by 2015, and implementing a new civil registry database. He stressed the need to improve civil registration coverage and raise people's awareness of the importance of completing birth and death registrations. He also emphasized the need to strengthen institutional cooperation focused on safeguarding minor's rights.

QUESTIONS AND ANSWERS

A question was asked about the existence of laws safeguarding the protection of personal data in the United States, and why there is no unique ID number that could be used for civic participation purposes, such as voting. The response was that the United States has strict privacy and confidentiality rules that govern personal identity and birth and death records. Because of the controversy that arose with regard to the eligibility of the President of the United States and where he was born, the information presented here was obtained from the White House website on which the President publicly disclosed his birth record. It is unlawful to disclose this information unless the individual chooses to do so.

One participant asked about the importance of having an Association of Civil Registrars for the purpose of ongoing, permanent exchanges of experiences. A panelist replied that it was an important step for Latin America and the Caribbean to create a mechanism for sharing best practices, pitfalls, and shortcomings and taking advantage of models used by other countries.

In response to a question about how to increase the rate of registration of deaths, particularly in countries where deaths are only reported when survivors expect to receive a pension or inheritance, a panelist stressed the importance of addressing the reasons why deaths are not declared. In many indigenous communities, there are cultural and religious reasons, but there is also a problem of access. Deficient death registration implies a responsibility on the part of civil registries to make registration more accessible. Another panelist stressed the importance of effectively managing both the demand and the supply side of registration. In terms of the supply side, the government must manage the ID infrastructure well in order to be able to conduct registration. In terms of the demand side, people must be motivated to come forward. It is important to negotiate with the private sector—banks, insurance companies, and others—to ensure that they require the birth certificate, with ministries of education to ensure that school enrollment is made on the basis of registration, and so forth. These measures would enable countries to increase the numbers of people registered.

A participant asked about the public's reaction to the change in the number of digits in the Korean ID card and whether there is an optimal number of digits to be used to identify a person. In response it was explained that the Korean government is currently reviewing iPins and drivers license numbers or another identifying number that could be used as a proxy for resident registration numbers. New resident registration numbers currently have 13 significant digits, and the government is reviewing whether the digits should be reordered. The problem with iPins is that they are also based on resident registration numbers. The government is seeking solutions to this problem.

One participant asked about the challenges faced by the Korean government with respect to the decision to prohibit the private sector from being able to collect or store resident registration numbers, and why the decision was made, particularly in view of the fact that many other countries are looking to extend the use of the national number within the public and private sectors. Panelists replied that the resident registration number in South Korea provides the basis for all personal information of citizens. The first

six digits of the number signify the birth date, and the other numbers indicate gender and the place of birth. It is therefore possible to use the personal number maliciously, if an unethical third party obtains the number. If there had been no abuses of the system, the idea of abolishing the system would not have emerged. The government's current policy allows utilization of resident registration numbers only by public institutions while restricting their use by private institutions. Legislation is in the works that will provide another identity verification method.

In response to a request for clarification of the policy that allows the government to collect identification data through proxy and the law that will amend this policy, the panelist said that in South Korea, receiving personal information though a legal proxy has not caused significant legal problems.

Key Lessons and Recommendations

- The registration of births and deaths is an essential administrative and legal function of government and the responsibility must be shared with the parents or the family. Birth and death registration needs to be complete, timely, and accurate, so the civil registration process establishes and manages the identity of individuals from the cradle to the grave.
- Identity goes beyond identification registration; it also implies acknowledging the cultural practices of indigenous and native populations. Close collaboration among public institutions and between public and private institutions is needed in order to improve access to civil registration.
- Governments should take appropriate measures and create a legal framework to guarantee the security of personal information and foster trust and confidence in the ID management system. The information management infrastructure must be robust to ensure security.
- Two ways to ensure the effectiveness of the civil registration system are capturing information electronically at the source and using it many times over for various purposes, with the acknowledgement of the individual.
- Additional ways to increase access and efficiency of registration include the use of a standardized clinical certificate to expand online registration, expansion of the biometric verification system to more hospitals, consolidation of birth and death registration forms, and enhancement of online access to certificates.
- Organizing civil registration and civil identification under a single agency has advantages in terms of synchronization and harmonization of processes, decision making, and resource management. As a result, an organic link between the two is established wherein in order to register for national registration, one must have registered the birth by law.
- Investment in civil registration makes good business sense and yields long-term benefits to the individual, the government, civil society and international development organizations as well as the private sector.

SESSION 4

Improving Efficiency in National Id Management System

The management of national identification (ID) systems is a key element of e-governance. However, electronic data are vulnerable to cyber attacks. Building electronic structures for national ID management systems and developing fundamental security measures require a prudent approach that takes privacy and protection of personal and confidential information into account.

CHAIR

Jeong Junhyeon, Professor, College of Law, Dankook University, Korea. He holds a PhD in Law from Korea University, and Master of Law from Sungkyunkwan University. His major area of interest is the privacy of individuals in modern society in legal aspect. Whilst performing academic duties, he keeps interacting with public organizations including local and central government for consulting in the privacy policy.

PANELISTS

Seong Woo Ji, Professor, School of Public Policy, Sungkyunkwan University Law School, Korea. Dr. Woo Ji is currently Head Professor of the Law School and Dean of the School of Public Policy. He holds Master's and Ph.D. degrees from the University of Mannheim, Germany. He has worked on data protection law, IT, and broadcasting issues for the Government of Korea. Currently, he is serving as Advisor on Radio Wave Policy to the Korean Communications Commission, Advisor on Administrative Adjudication for the Board of Audit and Inspection of Korea, and Advisor to the Press Arbitration Commission.

Kuk Hwan Jeong, Senior Research Fellow, Korea Information Society Development Institute (KISDI), Korea. In 2012–2013, he was an adviser to the Government of Uzbekistan on ICT issues. In 2000, he joined the Ministry of Government Administration and Home Affairs (MOGAHA) as Director General of the E-Government Bureau. He returned back to the KISDI in August, 2005. Prior to that, he worked at the National Computerization Agency (NCA), currently restructured as National Informatization Agency (NIA). He holds a Ph.D. in Economics from the University of Washington and a Bachelor's Degree from Seoul National University.

Edwine Ochieng, Advocacy and Governance Advisor, Plan International, Kenya. He provides policy direction for the organization's programs and key campaign agendas, including promoting universal birth registration through the global campaign Count Every Child. He works with the Kenyan government to support the strengthening of Kenya's civil registration and vital statistic (CRVS) systems. Previously, he was Senior Gender and Development Officer for the Ministry of Children, Gender, and Social Development. He was the Chief Operating Officer and project management and development consultant for Move on Africa, Ltd. Mr. Ochieng holds a Master's Degree in Project Planning, Design and Management from the University of Nairobi; a Certificate in Monitoring and Evaluation; a Diploma in Community-based Project Planning and Management from Kenya Institute of Social Work and Community Development and Bachelor of Science Degree in Mathematics and Computer Science from the Jomo Kenyatta University of Agriculture and Technology. He is a Ph.D. candidate in Project Planning, Design and Management at the University of Nairobi.

Vibhor Jain, Resource Person, Asian Development Bank. Mr. Jain is an Associate Director with EY India's Government and Public Sector advisory team and brings over 12 years of management consulting experience in the public sector. He has led the design, development, and implementation of some of the largest transformation projects in the public finance, national identity management, financial inclusion, payment systems, e-governance, and health domains. In India, he has led many reform programs, including the design and implementation of the world's largest and most complex biometric-based national identity management program covering over 1 billion people; Aadhaar, the National Population Register Program of Ministry of Home Affairs; and the Financial Inclusion Program with the Ministry of Finance. He recently advised the Government of Nigeria on setting up a biometric-based transaction system for the banking industry covering 18 banks along with the Central Bank of Nigeria. He has extensive experience in social sector development, working with multilateral and bilateral donors and private foundations on a range of issues focusing on health care and financial inclusion.

Maria Jose Viega, Professor of Technology Law, University of the Republic of Uruguay. She is the Citizen Rights Manager of the Government Development Agency for Electronic Management and Society of Information and Knowledge (Agencia para el Desarrollo del Gobierno de Gestión Electrónica y la Sociedad de la Información y del Conocimiento, or AGESIC) of the Presidency of Uruguay and professor of Legal Informatics, Computer Law, and Telematic Law. She is also the Coordinator of the Jurisprudence Group of the Institute of Computer Law, and Professor of Telecommunications Law at the Universidad de la Empresa. She has been director of the Information Law Institute of Law School (2010–13) and Director of Viega and Associates Law Firm (1992–2012). She is the author of a number of books on computer and technology law. She holds a Doctorate in Law and Social Sciences and Notary Public from University of Uruguay (UDELAR) and a Postgraduate Degree in Computer Law from the University of Buenos Aires.

INTRODUCTION

Jeong Junhyeon, Professor, Dankook University, Korea and chair of the session, introduced the session by noting that computerization of data is in progress in every country in the world, and that the globalized world functions through communication. Through the recent introduction of big data, cloud computing, and Internet of things (IoT) object communication, the system for identifying and distinguishing individuals is becoming stressed. Moreover, the identification system carries the potential for misuse, and it is in every country's interest to minimize misuse. In August 2014, South Korea restricted the collection of identifying information such as resident registration numbers with a few exceptions accepted only in cases where specified as a law. In cases where personal identification numbers have already been collected, the revised law requires that they be deleted within the next two years. However, considering the usefulness of personal identification data, setting up restrictions is not a universal solution; rather, it is important to figure out how to use information appropriately and how to regulate it so that privacy is protected.

DISCUSSION

Seong Woo Ji, Sungkyunkwan University School of Law, Korea, spoke on unification of information and communication technology (ICT) with the ID number system and the protection of personal information while efficiently developing Korea's ID number system. His remarks touched on three topics: the progress of ICT-ID unification, Korea's ICT strategy, and developing the ID system using ICTs. Previously, Korea provided one service through one network. Recently, however, and in the future through the Internet's unified network, access to services will be possible using diverse technologies. In the current period when ICTs are being integrated, using ID cards has its risks, and there are obstacles to its development. Thus, the strategy for ICTs in South Korea must first ensure that

they are used to strengthen the economy. Since ID numbers are considered part of ICTs, they are also part of the strategy to strengthen the economy. Second, ICTs must be used to further expand digital infrastructure in order to meet the needs of the future.

Kuk Hwan Jeong, Senior Research Fellow, Korea Information Society Development Institute (KISDI), discussed the strategy for the future of information and privacy. Korea is the number one country in applications of IT in government operations. As a result, there are huge challenges in protecting private information, because too much information on individuals is spread across government applications as well as private sector entities.

With respect to the relationship between e-government and the national ID system, the ID number system was a critical factor in developing e-government applications in Korea. The national ID number system is used to create many databases in categories such as vehicle ownership, real estate, business registry, and others. These databases enable the government to facilitate various services through e-government, such as issuance of driver's licenses, e-passports, establishment of business entities, military service, and others. These services are being delivered to citizens and businesses through the national portal in the form of G2C or G2B. E-government systems increase efficiency and service quality, national security management, and transparency.

The national ID number system was introduced in Korea in 1968 for national security purposes and convenience of public administration. While this system represented progress at that time, in the current information society, there are many e-government systems that contain data that identify individuals. The national ID system assigns a unique 13-digit number for every person for life, and it is key to authenticating information on citizens in the e-government system. The structure of this number system is widely known in Korea: the first six digits are birth dates, and the next seven digits further delineate qualities of the person—1 for male and 2 for female, and so on.

This unique ID number identifies every person, but it is also the source of the problem of privacy protection. It contains critical private information, such as age and place of birth, which may be sources of discrimination. This may violate the Constitution, which prohibits discrimination. Once privacy is breached, it cannot easily be fixed. What makes things more serious is that information on legal identity and civil status is the most frequently requested in the course of citizens' life events, such as marriage, change of address, entrance into university, and obtaining jobs.

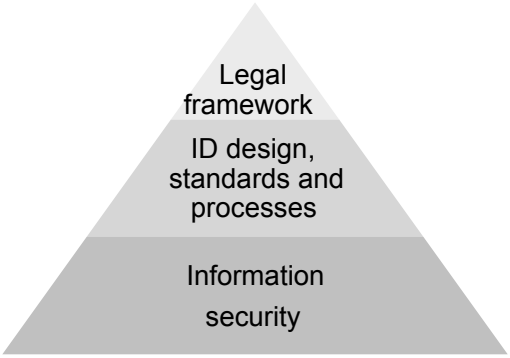
As IT applications are deepened and broadened, the probability of privacy infringement and financial loss increases. There are frequent discussions about changing the ID number system, but doing so would be costly. This is the main reason why the government is reluctant to change it.

In addition, the "privacy paradox" plays an important role when deciding on a new ID number system. The privacy paradox is the discrepancy between stated and revealed preferences on privacy. That is, while people claim to cherish privacy, they nevertheless divulge information about themselves on websites and mobile

Privacy is a key driver for security requirements in national ID management systems

Addressing privacy requires a 3-layered approach covering

- Legal framework.
- Processes within and outside ID authority.
- Information security.



devices for the sake of convenience. Smart strategies that take the privacy paradox into account are needed when designing a new ID system for privacy protection.

Any new approach to an ID system must consider the reasons for the current structure, which is risky and leaves people vulnerable to breaches of privacy. When the ID number system was introduced, there was not the degree of awareness of the theoretical or mathematical structure of the code, or recognition of the risk of privacy infringement that there is today, because no one predicted the impact of the information age 45 or 50 years ago. At that time, the aim was simply to obtain information on age and gender for the sake of efficiency or convenience of public administration.

Thus, a strategy for developing a new ID system must take into account the need to prepare the philosophical and theoretical underpinnings of identity: who I am, who individuals are, and what type of information is actually needed in the course of conducting public administration. Cost must be considered when updating the national ID system. Revamping the national ID system, which implies a major reshuffling of the entire

ID system, including e-government, may create business opportunities for software industries. Information on personal attributes will need to be removed from the code, and citizens should be provided the opportunity to choose their own ID numbers.

Press reports indicate that the current government is considering introducing a new ID number system by modifying the current numbering system or using some numbers in a regular pattern, as is done currently, or at random. Dr. Jeong proposed that the elements mentioned here should also be taken into account when modifying the national ID number system.

Edwine Ochieng, Advocacy and Governance Advisor, Plan International, Kenya, discussed his experience with digitized CRVS systems in developing countries. Some of the issues involve the use of ICT and protection of personal information in the context of CRVS systems.

In operation for over 75 years, Plan International has been working on birth registration for the past 15 years, principally through the Count Every Child campaign, which began in 2005. Plan believes that birth registration is impossible to ignore and entirely possible to achieve. It has facilitated and supported the acquisition of birth certificates for over 40 million children. One of its programs focuses on digital birth registration, working with governments and other development partners to use digital technology to promote birth registration and improve coverage, especially in marginalized communities. The introduction of digital technology has provided tools to notify, collect, record, store, and share data. Digital birth registration and digital technology bring new processes but also carry risks. Understanding the tools and the processes used is critical to mitigate risks to children during birth registration.

There are many organizational and administrative aspects to digital birth registration. One is that while the key responsibility lies with the government, there are other players, such as financial institutions and development partners. Working with so many partners engenders programmatic risks that may arise due to poor coordination, lack of understanding, and abuse of processes.

There are both opportunities and challenges in digital birth registration systems. Digital birth registration normally operates in complex environments that may be difficult to change. Therefore, embarking on a digital birth registration project requires a firm understanding of the potential threats to children and caregivers. The potential for the emergence of threats to child protection must always be carefully analyzed prior to implementing any digital system.

Some of the potential threats to children are identity theft, which involves fraud around personal data, including personal data on children by people who are techno-savvy and who want to use these data for their own benefit; privacy violation, or exposing personal information to uses with the knowledge or against the wishes of families; persecution based on personal characteristics, personal security violation or exploitation; exclusion from the ability to access social security and other social benefits that require a birth certificate to establish eligibility; and others.

Mitigating these threats will require clear guidelines that set forth standards and procedures

on the use of digital technologies and improvement of CRVS systems. Policy and legislative reform is key. Digital birth registration should be integrated into broader CRVS strengthening processes, and technical analysis should be conducted to understand the technical landscape and issues that involve the use of technology. Plan International works with governments and development partners to conduct such technical analyses. In Kenya, for example, Plan worked closely with the government and partners on a technical analysis to understand the technical landscape. Similar work has been done in Pakistan and other countries. Centralized management authorities should coordinate this work, and strong information and identity management systems are needed to manage personal information and identity, using secure devices, and institute strong technology and management protocols.

Civil registration is the sole continuous source of biographical data. Mr. Ochieng stressed the importance of giving due consideration to security and confidentiality. It is fundamental to protect the rights of individuals who are participants in this process, and especially to protect children from any harm or risk that may come with the use of digital technology.

Vibhor Jain, Resource Person, Asian Development Bank, discussed ways in which privacy has been handled in the Indian program from various perspectives. He divided the concept of privacy into three broad layers: the legal perspective, that is, what is being done to ensure that privacy exists; the ID standard and process perspective, both within and outside from a stakeholder perspective; and the ICT or information security perspective, to ensure compliance.

India still lacks a legislative framework that governs the national ID program; it still draws its inferences from the Constitution of India, two of whose articles address the protection of life and personal liberty and the fundamental right to freedom of speech. It is critical for any country embarking on creating a legislative framework to design it in such a way that it keeps pace with advances in technology.

He identified some of the key considerations from a privacy perspective. The first is the need to define the information set for establishing an identity, that is, what information should and should not be collected. In the Korean case, the identification number itself has many identifying elements that may result in breaches of privacy of the individual.

With respect to the storage, management, and access of identification data systems, strict rules must apply to the oversight routines of personal data. With respect to the sharing of ID data, he stressed the importance of considering whether it is necessary for government authorities to seek consent before using citizens' personal data and determining what precautions should be taken with respect to enabling ID-based profiling. With respect to ID-related offenses, it is important to determine which entity should serve as the custodian of the national ID program and the mechanism for lodging complaints regarding breaches of privacy.

Mr. Jain identified eight broad principles that should be factored in when designing a legal framework for privacy. They have to do with notice, choice and consent, collection limitation, access and correction, use limitation, openness, accountability, and preventing harm.

He suggested that it is preferable for the ID number to be a random number which has no intelligence built into it. From an authentication perspective, one of the fundamental principles while designing the Indian ID program was that there was only a binary response—a yes or no—and no information on residents was divulged to any government or private entity. The only place where details are divulged is in a Know Your Customer (KYC) request, but this also has certain built-in design constraints to ensure privacy. Whenever a person is asked for a KYC request, the user properly biometrically authenticates it before any details are divulged to any government or private stakeholder.

The second and most important critical part is that there is no transaction history that the national authority is allowed to keep. This means that no one knows the nature of any transaction that a person undertakes. This protects individual privacy.

From a technology perspective, the Indian system has adopted a few salient features to ensure privacy. One is Open Sources and Open Standards, which ensures that there is no propriety of lock-ins from any vendor.

When storing data offline or online, it is important to guarantee, through various technologies, that the data are secure. The Indian ID program is a federated model with only a one-way linkage. The program is responsible only for maintaining the national ID status of a resident but not for linking it to various social benefits; rather, is incumbent on the individual service departments to make sure that citizens' national ID numbers are in the national database ensuring that there is no profiling of individuals at any stage, that is, no data pooling or partitioning. No complete history is demographically captured along with the biometrics and stored in a single database.

Mr. Jain mentioned some privacy issues for the future, noting that there is no perfect policy and there will always be trade-offs between efficiency, privacy, and convenience. New applications will be vulnerable to ICT attacks. Therefore, national ID programs must continually evolve to ensure that they are keeping pace with new technologies and systems. With computing becoming so rapid and easily available, national ID programs will be more difficult to manage. The technology adopted a few years back is outdated, and the system needs to be upgraded from a policy, legal, and process perspective to ensure that privacy for residents is secure.

Mr. Jain concluded by quoting Benjamin Franklin, who said that "Any society that would give up a little liberty to gain a little security will deserve neither and lose both."

María José Viega, Professor of Technology Law, University of the Republic of Uruguay, began her remarks by showing a brief video about Uruguay which, among other things, discussed Plan Ceibal, a program begun in 2007 that provides every Uruguayan child of school age with a personal computer that can be used in classrooms and that serves as a tool for online education evaluation. One out of every five Uruguayans benefits from Plan Ceibal: 95 percent of educational institutions are connected to the Internet, and 65 percent of homes are equipped with personal computers. Uruguay has also reduced the digital gap between the richest and poorest households to only 6 percent. Having good

Internet connection is no longer a luxury for the few; it is a right for all.

Uruguay has the first long-term evolution (LTE) high-speed data network for phones and other mobile devices network in Latin America. In Uruguay, there is open data on the government, which is consolidated and transformed to produce information and services for all. Technology helps create new relationship between citizens and public administration. Technology has also made its way into the countryside, where, for instance, traceability of individual beef products is now 100 percent. Technology has not left the most innovative sectors untouched: there is a booming software industry in Uruguay that is attracting international attention.

Dr. Viega explained that Uruguay is committed to Uruguay Digital as a national policy. The process began in 2007 with the creation of the Agency for the Development of E-Government. Back then, e-government was conceived with a focus on citizens. Uruguay considers access to electronic government services a citizen's right that transcends technological development and applications. With this idea in mind, Uruguay passed a series of reforms that comprise the legal framework for e-government. The relevant laws include the Personal Data Protection Law, Public Information Access Law, Electronic Document and Signature Law, and Information Exchange and Interoperability Law between different public institutions. Currently, a cybercrime bill, which addresses behaviors such as identity theft, is under discussion in Parliament.

The legal framework can safeguard technological application in e-government, which in identity-specific terms has supported projects such as the Program of Modernization and Interconnection of Civil Registration and Vital Statistics Information Generation Processes. This is a very important project in Uruguay, as it currently issues electronic certificates of live birth and death certificates in conjunction with the Ministry of Public Health, the General Directorate of Civil Status Registry, and the National Directorate of Civil Identification, leading to a zero under-registration rate. Thanks to this, children receive their birth certificates and identity numbers as soon as they are born.

This project is underpinned by the Electronic Signature Law, since it involves electronic documents. It is also supported by the Interoperability Law, since the information involved in the project is shared between different public institutions.

The greatest challenge that Uruguay has faced has to do with applying personal data protection in the public as well as the private sphere. The situations encountered are never black and white; it is always necessary to give due consideration to the rights involved, which are protected in line with the guiding principles of data protection.

Two main principles guide the country toward achieving balance in the exercise of rights: the principle of purpose and the principle of prior informed consent. When evaluating whether a public entity such as civil registry can disclose information, the purpose with which data were collected in the first place has to be examined; if it falls outside of the legally defined scope of competence, prior informed consent must be obtained from the document holder. These principles gave rise to a series of rights known as the right to access, rectification, cancellation and objection, or ARCO rights for short. In Uruguay,

a few additional rights, such as the right to inclusion, have also been incorporated. In terms of identification, rights must be clearly defined, including the right to personal information access by the document holder and by third parties, and the right to update information.

Dr. Viega pointed to a few cases that show how the above mentioned rights have been given due consideration in Uruguay. First, the Personal Data Control and Regulatory Unit once consulted the National Directorate of Civil Registry regarding the possibility of obtaining information on its existing entries. In this case, information can be provided as long as the requestor is a public entity acting in accordance with its purpose and within its scope of competence. When private entities request such information, the consent of document holders must be obtained first.

The second case had to do with a request by the family of a person who had died as a result of torture during the dictatorship to list the cause of death on the death certificate. The authority in charge of data protection understood that this information had public value due to its context and, although cause of death is treated as sensitive data in most cases, an exception was made to include this information on the death certificate.

The third example was a request by the Municipal Government of Montevideo to publish an open-data catalogue using information from the civil registry. The civil registry declined to cooperate since the data were associated with personal identities and therefore could only be published in an indirect manner.

Dr. Viega concluded by saying that technology is key to e-government processes designed to improve identity registry. However, a legal framework is needed to guarantee that rights are protected.

QUESTIONS AND ANSWERS

A participant asked if the use of the iris scan to authenticate identity in India raises any privacy questions. He also asked if there is a dual system in India, that is, two competing ID systems. A panelist responded that the iris scan is only used at the time of enrollment and not as an authentication mechanism. Going forward, the iris scan could be used for critical transactions. India does not issue a card along with the national ID number; it only issues a number, and all transactions are authenticated online. There is only one unique ID program, called Aadhaar, run by two different ministries. The civil registration program is being integrated into Aadhaar.

A participant said that his country, Nepal, has enrollment for the national ID and is in the process of issuing a national ID number. Initially Nepal was planning to assign numbers along the same lines as Korea—the first ID number for the date of birth, one number identifying gender, and the other four numbers would be random. Now, it is issuing random numbers. He asked if this random number is adequate. A panelist responded that in 1999, the Korean Government began studying the problem of the ID number system in Korea and concluded that the number should be changed to a random number. Three years ago, however, the government further studied this issue and concluded that it would be very costly and time-consuming to change it.

With respect to codification in the number, another panelist said that there were many

challenges in terms of authentication when the random number was initially conceptualized, based on the experience of other non-national ID programs in the country, such as election and tax ID programs, which contain codification. First, today, many people do not know their date of birth. Second, with people becoming more and more mobile, it is difficult to codify where the ID originated or where a person belongs. This is one of the reasons why the government wanted to migrate to a random national ID system.

A participant asked about the kind of hardware and software that can be used so that the whole security system remains under the control of the authority and does not get captured by any provider of hardware or software. A panelist replied that one of the reasons that open-source technologies are used is that whether from a new technology or a usage perspective, the concept is to use ID as a platform. Many systems will interact with the national ID system. This is why each system should be easily interoperable with the national ID program.

In response to a question about why India has not tried to link the national ID program to the civil registration system, a panelist explained that step one was the launching of the national ID program in 2010. To date it has crossed 700 million enrollments for national ID programs throughout the country. Step two is linking the population registration program to the national ID program. Step three is adopting the national ID program in the day-to-day functioning of nodal departments, meaning that births and deaths will be automatically reported. Birth and death registration is undertaken by the states; therefore, state governments must take the initiative of linking their systems with the national ID program. This should happen in the next few months or years.

Key Lessons and Recommendations

- Since ICTs are instrumental in strengthening the economy and ID numbers are integral to e-government, ID numbers should also be considered an element of the strategy to strengthen the economy.
- The concept of privacy can be viewed from three main perspectives: the legal, that is, what is being done to ensure that privacy exists; the identification standard and process perspective, both within and outside; and the ICT or information security perspective, to ensure compliance.
- When the unique identification number system was first introduced as early as the 1960s in some countries, the risk of privacy infringement was not contemplated. At that time, the aim was simply to obtain information on age, gender, and other characteristics for the sake of efficiency in public administration. Thus, a strategy for developing a new civil identification system should consider which attributes and information are actually needed for identity verification in the course of conducting public administration.
- Revamping the national ID system, which implies a major reshuffling of the entire ID system, including e-government, may create business opportunities for local and national software industries.
- Embarking on a digital birth registration project requires an understanding of potential privacy threats to children and their caregivers. These include identity theft; privacy violation; persecution based on personal characteristics, personal security violation or exploitation; exclusion from the ability to access social security and other social benefits that require a birth certificate to establish eligibility, and others. Mitigating these threats will require guidelines that set forth standards and procedures on the use of digital technologies, improvement of CRVS systems, and policy and legislative reforms.
- A legal framework for e-government should be based on the principle of purpose and the principle of prior informed consent and should encompass, at a minimum, the following laws: a Personal Data Protection Law, a Public Information Access Law, an Electronic Document and Signature Law, an Information Exchange and Interoperability Law between different public institutions, and a law on Cyber Crime.
- There is no perfect privacy policy, and there will always be trade-offs between efficiency, privacy, and convenience (the privacy paradox).
- National civil registration and identification programs should never be static in nature; they must continually evolve to ensure that they are keeping pace with new technologies and systems.

SESSION 5

Improving Service Delivery Through Systematic National Id Management

A reliable identity management system is an important national resource, as it facilitates public service delivery and produces statistics that are the foundation for building a modern, efficient, and informed public administration system.

CHAIR

Cheol Oh, Professor, Soongsil University, Korea. Dr. Oh has over 20 years of teaching and research experience at both Soongsil University, Korea, and Arkansas State University, United States. He has been an advisor to the president and the Government of Korea in the areas of ICT strategies, e-government, performance management and evaluation, organizational reform, and others. He is currently serving as chairman of the working committee of Open Data Strategies as well as the Government 3.0 Implementation Committee. He has also participated in numerous international forums, seminars, and conferences as keynote speaker, moderator, presenter, and discussant in the field of ICT strategies, e-government and government innovation. He is actively involved in academic associations, serving as president of the Korean Association for Policy Studies, the Korean Association for Policy Analysis & Evaluation, and the Korean Association for Local Informatization. Dr. Oh holds a Ph.D. in Public Policy from the University of Illinois-Urbana, United States.

PANELISTS

Kwang-Sok Oh, Senior Research Fellow, National Information Society Agency, Korea. Prior to his current role, Dr. Oh served as the Vice President of the Information Infrastructure Division, Informatization Planning Division, and e-Government Project Division of NIA. He serves UNESCAP as resource person for e-Government in the Asia-Pacific region and teaches e-Government in graduate schools. Dr. Oh holds a Ph.D. in Public Policy from Indiana University at Bloomington.

John Yao Agbeko, Acting Registrar, Births and Deaths Registry, Ghana. Mr. Akbeko has 20 years of experience in Ghana's Civil Service. He joined the Civil Service in September 1994 and has served as Assistant Director, and then Director, of Administration. He has served in various government ministries and departments, including the Ministry of Tourism, the Scholarship Secretariat, the Registrar General's Department, the Ministry of Food and Agriculture. He holds a Bachelor of Arts Degree in French and Linguistics from the University of Ghana, Legon, and a Post-graduate Diploma in Public Administration from the Ghana Institute of Public Administration, Accra and L'ENA in Paris, France. He also holds a Master of Business Administration (MBA) from Wuhan University of Technology, Wuhan, China.

Muhammad Khalid Khan, former Director General of Civil Registration and Management System, National Database and Registration Authority (NADRA), Pakistan. During his career he has worked in many difficult and challenging environments, organizing and participating in flood relief, drought relief, and earthquake relief operations. From 2005 to 2012, he served as Provincial Director General of National Identity Card and ID Management and Civil Registrar. From 2012 to 2014, he became Civil Registrar of Pakistan. He has represented Pakistan in a number of international seminars and workshops and delivered numerous presentations and lectures. Since September 2013, he has been a member of the Regional Steering Group of UNESCAP. Dr. Khalid Khan holds a Master's Degree in Business Administration and a graduate degree from Pakistan Staff College.

Luis Díaz, Division Chief, Social Information Division, Ministry of Social Development, Chile. Since March 2014, he has led the Social Information Division of the Ministry of Social Development. Previously, he was senior economist at the Research Division of the same Ministry (2010–2013) and head of the Social Division in the Ministry of Social Development (2007–2010). Between 1993 and 2007, he headed various departments conducting research, and he has been an advisor to various ministers of Social Development. He has also been a consultant to the American Institute of Social Planning and a professor of Economics in undergraduate and graduate programs in various universities and institutions such as The Economic Commission for Latin America and the Caribbean (ECLAC) and the Facultad Latinoamericana de Ciencias Sociales (FLACSO). He holds a degree in Economics from the University of Chile with postgraduate studies in the Social Sciences of Economics Labor Program and a Diploma in International Studies from the Colegio de México.

INTRODUCTION

Cheol H. Oh, Professor, Soongsil University, Korea, introduced the panelists and posited the main issue to be discussed in the session, which is how data can be managed to better provide services to citizens. This is critical to the success of e-government and an information society.

DISCUSSION

Kwang Sok-Oh, Professor, Soongsil University, Korea, discussed how Korea has improved public services through ICT-enabled management of resident information. He reviewed the multiple purposes of identity management or civil resident registration, including the creation of legal documents and establishment of a legal identity, which in turn facilitates citizens' ability to exercise a broad range of basic rights and privileges, and the creation of a data source for the compilation of statistics. Civil resident registration is vital to effective design and implementation of social and economic policies and programs, including governance, evidence-based policy making, and delivery of public services.

Korea's resident registration system is a combination of decentralized systems within a centralized system. The legal responsibility rests with the Ministry of Government Administration and Home Affairs (MOGAHA),[1] while management and recording of resident information are delegated to local authorities.

Korea enacted a Resident Registration Law in 1962. Since its enactment, the law has been revised 17 times to accommodate technological progress and to modernize the registry service. Korea's resident registry system is a uniform structure that is strictly enforced. Its development can be divided into three phases: a manual, paper-based system; a computerized system, and an integrated information-sharing system.

For the first two and half decades, resident registration management in Korea was conducted by manually recording and tracking changes. Records were handwritten, making it difficult to restore information in case of damage or loss. Applications for certified copies were constrained by the location of original registration. Changes of address took longer than three days to register, and a lot of space was required to keep and store paper registries.

To improve the efficiency of resident registration management and to enhance convenience, the Korean Government computerized resident registration along with real estate and car registration in the late 1990s. Some of the key aspects of the transition from a paper-based to a computerized system included data entry of 52 million personal and household records and interconnecting government offices across the nation over a computer network. The launching of the computerized Resident Registration System in 1991 ushered in a range of benefits, including enhanced quality of resident registration data. Computerization alone does not ensure more accurate or more complete data, but it facilitates detection of missing, inconsistent, and duplicate data by built-in functions such as validation rules and automated checks. Computerization brought about gains in operational efficiency by automating manual processes and processing related functions and activities efficiently

[1] Formerly the Ministry of Security and Public Administration (MOSPA).

and reliably, including voter lists, notification of school attendance, and taxation. It also broadened the uses of the resident registration system through linkage to other computerized systems, including immigration services and passport issuance.

In the early 2000s, with the rapid progress in ICTs and the popularization of the Internet, public services were increasingly made available online. This provided new opportunities for collaboration and innovative, one-step online services. The key building block underpinning the integrated one-step service is the capacity to share data and collaborate among different government agencies. This information-sharing system for resident information was developed in 2001 to meet the requirements of integration of electronic services across organizational and jurisdictional boundaries. The best example of an information-sharing system is a citizen's request for a government service. Rather than producing paper certificates, the applicant agrees to his or her residential information being checked online and the service provided by the government agencies, which check the information online as part of processing the application.

This information-sharing system eliminated the need for citizens to submit paper certificates as part of civil service application requirements. The sharing of resident information also allowed the administration of services to be streamlined through the use of life events data to trigger the review of entitlements under various government programs, such as child support benefit claims.

In summary, Korea has made steady improvements to identity management and service delivery, particularly through the expanded use of ICTs and information sharing. The gains achieved through greater utilization of ICTs and broad information sharing are substantial when combined with other reforms to reengineer business processes. The sharing of resident information enables the provision of joint services from multiple government agencies and a reduction in the time spent reviewing and verifying identity and resident information. The information-sharing systems help the government enhance its capacity to meet citizens' needs with targeted solutions.

John Yao Agbeko, Registrar of Births and Deaths, Births and Deaths Registry, shared Ghana's experience developing a civil registration system, specifically, the background, operational structure of the registry, programs to achieve the mandate, challenges, and the way forward.

Registration in Ghana started in 1888 with registration of expatriates. At that time, only deaths of expatriates were recorded. This was done mostly in the coastal regions, in what used to be known as the Gold Coast but is now Ghana. Birth registration was introduced in 1912. Between 1912 and 1926, the registration system was placed under the Medical Department of the colonial administration. Between 1948 and 1960, it was moved to the Registrar General's Department, which was also charged with registration of companies, births, and marriages. In 1965, Parliament passed Act 301, which provided the legal basis for the birth and death registry. The mandate was to manage and promote the vital registration system in the country. It sought to establish an efficient system of registry of all births and deaths occurring within the borders of Ghana, to extend birth and death registration to the entire population, and to obtain enough vital statistics data to derive reliable demographic estimates to support public health, planning, and policy formulation at various levels of government.

The operational structure of the registry consists of 470 registries throughout the country as well as community registration points. There are district registration offices in all 216 districts in Ghana; there are regional registration offices, and there is a central registry, located in the capital city.

Among the mechanisms employed to ensure greater coverage are partnerships with various agencies, such as the Ghana Statistical Service. This service provides technical support and coordination of CRVS systems and assistance with some of the activities carried out in communities. The registry also joins with the Ghana Health Service during child promotion week and the immunization campaign that the Health Service undertakes. Officers accompany Health Service personnel to register babies. The registry also collaborates with the Passport Office. An officer located in the Passport Office authenticates the birth certificates attached to the registration forms before they are administered.

It collaborates with the National Identification Authority and the Ghana Education Service. On the first day of school, officers accompany the officials of the Ghana Education Service to provide proof that children have reached the age of 6 to attend school. For those children who are not registered, officers assist parents and register the children. The registry also works with faith-based organizations, appealing to them to help parents give their children legal and national identity. Other partners include UNICEF, the United Nations Population Fund (UNFPA), and Plan Ghana.

The registry conducts awareness raising campaigns through radio and TV programs and a Birth and Death Registration Day, which is September 1 every year. Community meetings are organized in which the registry talks to people about registration of births and deaths. It also undertakes mobile registration, sending teams from a region and district to the communities where their population is brought together to explain the process to them, and those who have not registered can do so.

The registry also conducts capacity building, specifically for the community population register. It sends officers to the communities with assistance from the Ghana Statistical Service. Censuses are conducted at the community level and entered into a register. These registers are then put in the custody of united committee leaders or chiefs who have been trained to carry out the process. Registers are left with them and when an event occurs, they enter it into their register. Subsequently, district-level registry officers go to the community to collect these events for processing.

The system was computerized in 2007. Information is entered into the system, which generates computerized, certified true copies of certificates. The registry plans to expand computerized services through the mobile network.

Among the bottlenecks to be resolved are registration that is not linked to service delivery in early years, low awareness of the importance of benefits of early registration, late and multiple registration of births, and incomplete birth and death registration coverage. Registration coverage has stagnated at 65 percent for births and 25 percent for deaths. The absence of registration services in rural areas and the limited monitoring and supervision of few staff and volunteers due to immobility, as well as inadequate budgetary allocation and office accommodations, account for the low registration rates.

There is growing public awareness about the uses and the importance of registration documents. There is increased collaboration with stakeholders, including the District Assembly, UNICEF, and Plan Ghana, the Passport Office, the Driver and Vehicle License Committee, the Electoral Commission, and others. Birth and death registration needs to be linked to the national identification system, and ICT services need to be used more efficiently to improve access to registration and to the Comprehensive Assessment of Civil and Vital Registration System as means of improving the civil registration process in Ghana.

Muhammad Khalid Khan, former Director General of Civil Registration and Management System, NADRA, said that a few years ago, only a small segment of the Pakistani population had national ID cards, but with the launching of more customer-oriented services, it has now become virtually impossible to live without a national

identity card. Dr. Khan shared his experience with the National Database and Registration Authority (NADRA) and explained how a small organization revamped its identity management system to become a global leader in providing identity management solutions all over the world in just 12 years.

Organizationally, NADRA falls under the Ministry of the Interior. The identity management strategy is based on facial recognition, all-finger identification, and data processing. The system contains 503 million fingerprints, and 180 million facial images.

NADRA has provided assistance internationally. Its projects include the Civil Registration System of Sudan, the Passport Issuance and Control System of Kenya, the National Driver's License System of Bangladesh, the Identity Card Issuance System in Nigeria, and recently, the Identity Card Issuance System in Sri Lanka.

In 1973, NADRA issued manually prepared identity cards and photographs and maintained them in a database. In 2002, it began computerizing the national ID card system and has since then maintained the database by capturing biometrics. In 2012, smart cards with additional services were introduced. The national identity documents issued by NADRA are the national ID card of Pakistan, the identity card for overseas Pakistanis, ID cards for citizens with special needs, the smart card for people living in the country, and the smart card for overseas Pakistanis.

The national identification registration strategy focuses on registration, and registration growth through public services. By 2008, 54.1 million people had been registered, but with the introduction of public services, the registration rate increased to 96.5 million, or about 93 percent of the total adult population.

The services being provided through the National Identity Program include financial support for internally displaced persons (IDPs), support to flood victims, income support and social security programs, electoral rolls, machine-readable passports, and the pension disbursement program. The system has also enabled the government to increase tax revenues by identifying tax evaders. There is an arms license issuance project, an integrated border management system, electronic highway toll collection, a kiosk and e-Sahulat payment gateway, and a cellular company SIM card issuance system. In Pakistan, biometrics are obtained by vendors. The smart cards have higher security features and are compliant with ICAO 9303. Services that use smart cards include banks, social services, educational institutions, government services, insurance, and health care. The government uses smart cards to provide services to the poor and the vulnerable, including pensions, targeted subsidies, insurance, emergency cash transfers, damage compensation, social protection assistance, and old age benefits.

NADRA's targeting strategy is to use its database to validate eligibility of beneficiaries at the time of registration. It is used to validate eligibility for social security program and the Benazir National Income support Program, as well as the so-called Watan Card, comprising benefits delivered to flood victims and IDPs. NADRA's database provides a vital source of information while designing new social security services. In some places, beneficiaries of the Benazir Income Support Plan also receive mobile phones, through which they receive messages alerting them that

they can collect their money from the nearest e-Sahulat center.

Dr. Khan discussed his personal experience of providing relief to flood victims during his tenure as Director General of the Province of Sindh. In 2010, Pakistan was hit by the worst flood in recorded history, affecting over 20 million people. It was a challenge for the government to provide assistance expeditiously. After considering various options, NADRA was given the green light to implement a transparent and efficient financial support system. Within three days of receiving the government's approval, NADRA was able to identify the beneficiaries from its database. The decision was made to give financial assistance to heads of household first, and later, based on the extent of damage, assistance was provided to the flood victims.

Since most of the belongings of the affected population, including their identity cards, were washed away in the floods, NADRA devised a strategy to issue them identity cards after verifying them using a biometric verification system. After retrieving the data, duplicate IDs were issued, which was a prerequisite for obtaining financial assistance. Another impediment was how to approach the victims. As soon as road links were available, NADRA sent its vans with mobile enrollment kits to capture their data. Provincial governments, including villages and cities, notified CNIC holders, that is, heads of household in the notified areas. The banks and financial institutions opened virtual accounts. Once people visited the NADRA center, NADRA verified biometrics and issued electronic approval after one-to-one finger matching. Following this procedure, people were issued debit cards, which could be used in any ATM machine. Where ATM machines were not available, the banks established point-of-sale systems for payment. In Phase II, after verifying the extent of damage to households and livestock, assistance was provided.

Smart cards are also used for national security. With the aid of the biometric-driven identity management system, certain services are being imparted to law enforcement agencies. The identity of suicide bombers and criminals in closed circuit TV (CCTV) footage can be established using facial recognition technology. NADRA provides biometric and forensic services to the police during the investigation, following requests made through proper channels.

The system can also be used to identify airline crash victims. On April 20, 2012, a Bhoja Airline plane crashed near Islamabad and all 127 passengers perished. NADRA carried out real-time biometric data cross matching of the deceased on site, and more than 80 percent of the victims were identified. Pakistan also has an integrated border management system (IBMS). The IBMS service center has the data from Interpol, the NADRA database, passport and visa databases, the exit control database, and the airport security system.

In conclusion, Mr. Khan said that with the help of foolproof, comprehensive, and systematic identity management, better public-oriented services can be delivered. It can provide the basis for identification, good governance, and secure documentation that delivers the multiple goals of mitigating identity theft while safeguarding and facilitating the public interest.

Luis Díaz, Division Chief, Social Information Division, Ministry of Social Development, Chile,

based his presentation on the work of the Ministry of Social Development, which is a user of the civil registry, or of the civil identification institution of a country. He focused on the importance of unique identity registration for overall program design and implementation as well as evaluation of social policies.

The point of departure is to have a unique identification number for all residents. Chile introduced the use of a unique personal number in 1972. An identification number is assigned when a child is born. The healthcare coverage of births was 98.9 percent in 2009, and it should have exceeded 99 percent by now, which provides certainty that practically all of Chile's population is covered in the national registry.

The Civil Registry of Chile has much more information than what is actually used by the Ministry of Social Development. The Ministry is particularly interested in the ID number, which is used to integrate a variety of databases of the State. The Ministry of Social Development also has an interest in updating its information based on births and deaths and validating the information along the way as its registry gets established.

From the perspective of the Ministry of Social Development, one of the core issues in carrying out its tasks has to do with building an integrated social information system, allowing for the design of focused instruments, the definition of lists of beneficiaries, and follow-up and evaluation of policy and program implementation.

Similar to the majority of Latin American countries, Chile's first integrated social information system was created under, or in parallel with, a particular program that provided social benefits to citizens. In most Latin American countries, the earliest integrated social information systems were created to administer conditional cash transfer programs. In Chile, the first integrated social information system was created with the Chile Solidario program, designed to assist people in extreme poverty. This had an advantage in the past, as the needs of the program triggered the launch of Chile's current social information system. However, one disadvantage that became obvious over time was that it is difficult to design and implement an integrated social information system that could be of use to many different social policies when it was created for use by one specific program.

The earliest experience in integrated social information systems included the Social Information Registry, whose main source of information was an instrument called the Social Protection Card. The Social Protection Card is currently a questionnaire used to interview families and collect self-reported information based on which the families' vulnerability level is determined. The Social Protection Card is a valid tool for building family socioeconomic profiles and determining applicable social programs.

Today, there are around 400 different social programs in Chile, 270 of which can be identified down to the individual, and social information on beneficiaries is available on nearly 200 of these programs. Whether it is possible to integrate this information into the Social Information Registry—which is information available through the Social Protection Card and through the list of beneficiaries of different social programs—depends on the unique national registry, or the unique ID number. The ID number enables integration between the Social Protection Card

database and the various social program beneficiary databases.

Although the current integrated social information system is a giant leap forward from what existed in 2007, it falls short of its potential. The Social Protection Card is built on self-reported information, which has become less relevant with the passage of time. Birth and death information was updated to the Card from the Civil Registry as changes in family and household composition are captured, and administrative information, such as regarding pensions, was also incorporated. Since most of the information is self-reported, it is unrealistic to organize frequent, large-scale surveys. In view of the problems that have arisen around self-reported information, the Social Protection Card has been losing legitimacy, since it is no longer able to reflect the true socioeconomic condition of the families.

In light of the above, the Government of Chile has commissioned the Ministry of Social Development to develop a new integrated social information system that can overcome these shortfalls and maximize the use and the potential of these types of instruments. A good integrated social information system must be capable of supporting the design and implementation of social policies and programs; that is, it must be capable of identifying beneficiaries and managing the list of potential beneficiaries, allowing for program monitoring and follow-ups as well as implementation monitoring and evaluations or impact assessment of different social programs. As another function of the Ministry of Social Development, the integrated social information system enables coordination of existing social programs, design of integrated programs or responses that can tackle the multifaceted challenges faced by the most vulnerable families, and prevention of problems of omission or duplication.

The challenges of building an integrated social information system have to do mainly with the possibility of having a unique identifier at an individual level, which enables the tracking across administrative databases of different institutions of the State. The new system will focus on the administrative registry, where the burden of proof lies more with the State than with the families doing the self-reporting. Having data is not enough for building a good integrated social information system, since it implies enormous challenges in the areas of systems development, information security, documentation, and metadata, to name a few. The challenges are many, but integrated systems can be very useful from a social policy perspective.

QUESTIONS AND ANSWERS

A participant said that linking registration with service delivery works well in terms of increasing birth registration rates, but he asked how death registration could be incentivized, such as, for example, by making contacts with funeral directors, religious authorities, and cemetery directors to attempt to establish a closer link between a death occurring, a burial, and death registration. A panelist said that there are registry officers in all the major hospitals in Ghana who issue burial permits when a death occurs. Pastors and imams are asked to inspect the burial permits before they agree to perform a burial. The registry is now informing the public that if they fail to register the death and come later to ask for a certified true copy of death certificate, it can no longer be issued after five years. However, it is

still possible to register a death five years after the fact. Death registration rates are rising gradually, but there is room for improvement.

Another participant said that the civil registration entity in his country had made progress in recent years by involving the religious leaders who lead prayers before the funerals, which is obligatory before taking the funeral to the graveyard. It has also involved village headmen, who are reporting deaths and births to the Union Councils, where there are offices for civil registration concerns. The registry has also generated a need: if a person who dies has property and a bank balance, without the proper death registration, the property cannot be transferred to the heirs, nor can the money be turned over to the next of kin.

A participant wanted to know how heads of household were identified after the devastating floods in Pakistan. He asked if they were already identified in the database, or whether a separate process of identification was undertaken for the purpose of disbursement of cash assistance. The panelist said that this information was already in the database, which is why the list of beneficiaries could be compiled within three days and handed over to the banks.

The previous questioner followed up by noting that most identity systems are individual-based, not household-based, particularly since households are more fluid and subject to change. In fact, the rate of growth of households is sometimes higher than the rate of growth of the population. He asked how a household identity number could be controlled and changed. The panelist replied that in Pakistan, when a person gets married, once he goes to the NADRA registration office for an update of status, a new family tree is created in the database, and he becomes the head of the family.

A participant asked how NADRA is generating its own resources to fund and carry out identity management systems. The panelist replied that NADRA receives some funding through international projects. For example, when UNHCR asked NADRA to register refugees, it provided funding for that purpose. Since the CRVS system is different from the National ID Card system, NADRA does not receive any budgetary resources from the government for this purpose. For such programs it seeks donor funding. For ID cards there is a very limited amount of funding, and NADRA charges a nominal fee for smart cards, verification, and other services.

A participant asked whether NADRA's database had a geographical component used to target households. The panelist replied that once a natural disaster strikes in Pakistan, the Revenue Department designates the area a disaster area. Once the area is so declared, NADRA has the addresses ready in its database. If the government decides to give financial assistance to every individual, then it can be provided. However, in this case, the government decided to give financial assistance to heads of families. These data were also available.

A participant noted that for many years, Latin American countries have been developing social programs targeted at the most vulnerable sectors of society. One key requirement for these programs is to have previously identified the beneficiaries through their national ID number or its equivalent in each country. Some programs that provide cash directly to beneficiaries require them to honor certain commitments, such as keeping their children in school, vaccinating

them, or making sure that their children receive the benefits earmarked for them. He asked about the mechanism or policy used in Chile to manage these cash transfers to beneficiaries of social programs in which cash is dispersed as part of the program. The panelist replied that this is done through the so-called "socioeconomic profiling instrument," which identifies the beneficiaries of a social policy or a program that disburses cash or in-kind payments. The coverage is determined and the list of beneficiaries defined, and then cash is dispersed. As the scope of action is social policy, the system has information on practically the entire population, or at least on all the sectors that require government support. Based on the program requirements and characteristics, the size of the potential beneficiary population must be estimated to determine whether supply can truly meet demand. Once this is done, the beneficiaries must be identified and provided with subsidies, via payments in cash or in kind.

Key Lessons and Recommendations

- Civil identification data should be linked to service delivery in order to make the best use of national ID management. For example, national ID data can be used to distribute relief to flood victims.
- A well-functioning civil registration system must be capable of supporting the design and implementation of social policy and programs; that is, it must provide authentication services for potential beneficiaries, thus allowing for program monitoring and follow-up as well as evaluation or impact measurement and prevent problems of omission or duplication.
- A truly integrated social services system requires a unique individual identifier, which enables administrative databases of different institutions of the State to communicate and authenticate beneficiaries across and between administrative registries.
- The rate of death registration can be improved by involving funeral directors, pastors and imams, and cemeteries in establishing a closer link between a death, a burial, and death registration, and by creating a need for a death certificate in order to apply for transfer of the deceased person's next of kin.
- There is a potential threat to utilizing the dataset held by the government, which is the misuse or overuse of personal data, by "function creep." Personal data collected for one purpose must not be used for other purposes without prior consent. It is important to maintain a balance between providing better services and protecting the privacy of citizens.

SESSION 6

Secure Identity System for Efficient Management of Social Transactions

Countries with good social policies need to devise systems that ensure inclusiveness. Secure identification systems are key factors in the successful implementation and monitoring of various provisions and services.

CHAIR

Raj Mitra, Chief, Demographic and Social Statistics Section, UN Economic Commission for Africa (UNECA). At UNECA, he leads a continental program for Africa on Civil Registration and Vital Statistics (CRVS) and coordinating programs on Population and Housing Census, Gender Statistics, and Statistics on Development Indicators. Prior to joining UNECA, he was the Planning, Monitoring and Evaluation Specialist at UNICEF India, where he made significant contributions to the revamping of India's CRVS system and the 2001 Census. He began his career in the Indian Statistical Service in 1981, where he managed field statistical activities. During his 25 years of service to the Indian Government, he held a number of senior positions, including Head of the Civil Registration Division and Head of the Census Division in the Office of the Registrar General, and Census Commissioner.

PANELISTS

Jeong-rye Choi, Chief of Disaster Cooperation Division, the Ministry of Government Administration and Home Affairs (MOGAHA), Korea. Ms. Choi is in charge of administering the disaster management training program. Previously, Ms. Choi worked on improving the resident registration information system in the Resident Service Division. She was part of the team that transformed the manual resident registration procedure to the current electronically processed resident card,

improving overall civil services. While working in the e-Government Support Division, she carried out a project to identify outstanding local government IT systems that could be modified for broader government use. She was part of a team that integrated three local governments IT systems into one. Ms. Choi holds a Bachelor's Degree in Information Statistics from Chonbuk National University, Korea.

Lydia Kandetu, Deputy Permanent Secretary, Department of Civil Registration, Ministry of Home Affairs and Immigration, Namibia. Ms. Kandetu has worked in the Ministry of Home Affairs and Immigration since 1983. She has been the Head of Civil Registration since 2006. She holds a Master's Degree in Business Administration (MBA) from the University of Maastricht and a Master's Degree in Public Policy and Administration (MPPA) from the University of Namibia.

Vichian Chidchanognarth, Director, Bureau of Registration Administration, Ministry of Interior, Thailand. Prior to his current position, Mr. Chidchanognarth held several positions in the Department of Provincial Administration, including Specialist in Information Technology and Database Management of the Bureau of Registration Administration; Computer Technology Officer at the Senior Professional Level of Training Technology Center; Director of the Division of Technology Administration and Development on Registration; and Computer Programmer of Technology Administration and Development of Registration Division. In 1997 he was named Chief of Regional Registration Processing Center of Nakhonratchasreema Province. Mr. Chidchanognarth holds a Bachelor of Political Science from Chulalongkorn University and a Master's Degree in Information Technology from King Mongkut's Institute of Technology, Ladkrabang.

María del Carmen Tamargo, Independent Consultant, Argentina. A sociologist specializing in gender issues, Ms. Tamargo has been external consultant for the Inter-American Development Bank on legal identity topics. In the last eight years, she has carried out studies on under-registration with a gender and ethnicity perspective for the Latin America and the Caribbean (LAC) region. She has supported the design and evaluation of modernization projects in identity registration systems. For more than ten years, she worked in public management in Argentina. She was project manager of the Assistance Program for Vulnerable Groups and coordinator of the Conditional Income Transfer Program "Families for Social Inclusion" in Argentina. She has a Master's Degree in Gender, Society, and Policy from FLACSO, where she teaches a seminar on Gender Perspectives in the Evaluation of Programs, Projects, and Policies.

INTRODUCTION

Raj Mitra introduced the session and the panelists. The session aimed to provide the conceptual and operations contexts and implications of identity systems in varied social transactions in a country. He indicated that presentations and discussions under this topic were expected to provide important lessons, raise policy issues, and propose reforms.

DISCUSSION

Jeong-rye Choi, Ministry of Government Administration and Home Affairs (MOGAHA), Korea, briefly reviewed the history of South Korea's resident registration number (RRN) privacy protection policy for secure transactions. In 1962, South Korea was experiencing confrontations with North Korea. At that time, in order to protect the social order, South Korea established the Resident Registration System (RRS) to register changes of residency of its citizens. In 1968 and 1975, South Korea made changes to the individual RRS and introduced identification (ID) cards to authenticate individuals' identities anytime and anywhere. In 1988, South Korea instituted a system for managing resident information for the whole nation and established a database for resident information, including resident registration number (RRN), name, address, and history of changes of residence.

In the 1990s, voting, taxes, welfare, and other administrative services that used resident information as a basis were computerized. This not only simplified administrative services but also expedited civil complaint services, making such transactions more convenient for citizens. Korea's electronic information system, based on the RRS, was ranked first in the United Nations' evaluation of electronic information for three consecutive years starting in 2010. While the RRS has both advantages and disadvantages, on balance, the RRS has made more positive than negative contributions in terms of social transactions and convenience.

There are a number of advantages of the RRS. First, the RRN is the essential personal identification number for citizens. It was instrumental in Korea's becoming an information-oriented society. The RRN was also used as an index key to establish a variety of information systems in the public and private sectors, enabling the transfer of information between different systems. It also enabled Korea to provide nationwide services and Internet service.

Second, the RRS is the most trustworthy national identification system in Korean society. It is used to confirm identification when issuing civil affairs documents and other forms of identification, such as passports and drivers licenses.

Third, the RRS simplifies a variety of administrative tasks, as it provides basic information for health insurance, vehicle registration, voting, and other needs. Compiling voter rolls of 40,000,000 people for presidential and local elections for the entire nation takes only around two hours.

Despite these positive uses of the RRN, some negative effects are emerging. For example, the RRN is sometimes used to commit identity theft and fraud. Another problem is the potential for invasion of privacy, since the RRN contains personal information.

Lydia Kandetu, Deputy Permanent Secretary, Department of Civil Registration, Ministry of

Home Affairs and Immigration, Namibia, explained how Namibia is working to ensure efficient and accurate social transactions by building an integrated population registration system. She began by providing a brief history of the Republic of Namibia, which became an independent country in 1990. The Ministry of Home Affairs and Immigration is charged with managing the National Population Register, which registers births, marriages, and deaths and issues IDs under one roof. The High Court in the Ministry of Justice is tasked with registering divorces.

From 1979 to 1994, all residents in Namibia were issued ID cards. ID records with biometrics were created and stored. In 1995, a new ID was introduced for citizens and permanent resident permit holders in Namibia, and all historical records were digitalized and stored in the new automated National Population Registration System (NPRS). Birth, marriage, and death records were still kept and registered in manual regional registers—most people only got birth records after 1990. It is noteworthy that even though a law regulating the registration of births, deaths and marriages had been passed, birth and death registration was not compulsory in Namibia before independence. Following independence, the government urged everyone to register births.

In 2009, a new web-based and integrated NPRS was designed building on the existing ID system. Concurrently, the Ministry began digitizing all of its historical records, aiming for a complete and accurate database where all civic events are stored under one demographic profile for each person. The Office of the Prime Minister and the Ministry of Home Affairs and Immigration designed and developed the system. The NPRS in Namibia is working to house birth, ID, marriage and death records, as well as divorce records, under one roof. The aim is for every Namibian to have a civil profile.

From 2012 to 2013, all Ministry of Home Affairs and Immigration offices were required to electronically capture all new birth and death applications in the NPRS. All 2.7 million birth records have been digitalized, and 70 percent (50,000) of all death records have also been scanned and indexed. All 180,000 marriage records were scanned and are in the process of being indexed. The first interface to electronically share specific registration details with stakeholders has been designed, and the piloting will begin in October 2014. Stakeholders such as the Namibia Statistics Agency, insurance companies, and banks are requesting information on users. The data are protected under the Identification Act of 1996. It is expected that the NPRS will begin producing statistics in 2015, and 85 percent of all Namibians hold ID cards. The Comprehensive Assessment Report is about to be finalized, and a strategic plan workshop is planned for later in 2014.

Namibia provides free health care, free primary education, and pensions for all Namibians over the age of 60, and social grants for orphans and mentally and physically challenged adults and children. The country also safeguards the integrity and accuracy of identity data. In order to provide quality services and ensure that social benefits are channeled to eligible citizens, the respective government offices depend on timely and accurate registration of birth, marriage, ID, and death records by the Ministry of Home Affairs and Immigration.

The NPRS prevents people from having multiple identities by directly linking children to parents' records and capturing biometrics at the age of 16. It allows for multiple reporting and population projection abilities. Other government systems can, through interfaces, request limited information to verify the authenticity of a record and whether the applicant is still alive to prevent social fraud. It can also confirm family relationships.

Establishing a well-functioning ICT environment is crucial for the success of timely registration. The full implementation of the NPRS has been continuously hindered due to ICT-related matters. The new National Population Registration Bill, which provides for the registration of all civil events under one roof, has been revised to include all electronic transactions. It is hoped that the bill will be tabled in 2015.

Namibia secures citizens' privacy by limiting access to the data at all levels from the beginning, by only allowing limited data to be viewed by other stakeholders, and by controlling access and monitoring entries by staff members. The integration and centralization of records, which have greatly facilitated the retrieval of personal data, require strict confidentiality and access polices.

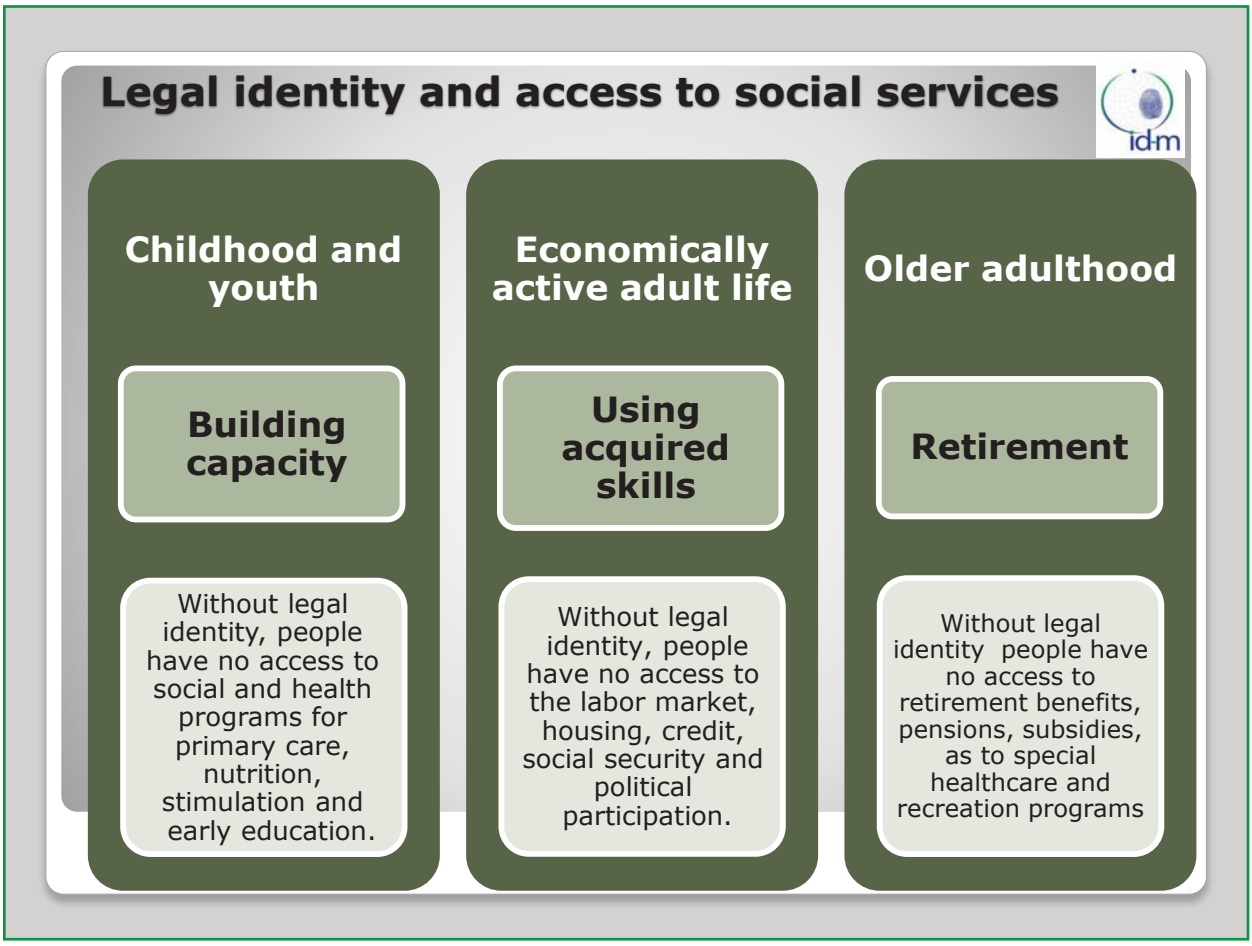
Vichian Chidchanognarth, Director, Bureau of Registration Administration, Ministry of Interior, Thailand, provided an overview of his country's civil registration system. It began in 1956 with a national census to produce household registration IDs. The household registration document is very important in Thailand and contains records on every household. In the first 15 years, births, deaths, changes in household addresses were done manually in the more than 1,000 registration offices throughout the country.

The original ID card in Thailand was a typed document. In 1984, with the advent of computers, household registration documents were prepared using unique 11-digit numbers, and citizen's identity numbers had 13 digits. It took more than three years to establish a data entry and data processing center that contained a central population database in Thailand.

New ID cards were produced from the database for the first time in 1987. In 1997, documents were digitized throughout the country. It took another eight years to change the method of surveying people and updating the database. By 2005, it was possible to enter real-time updates into the civil registration system at district offices all over the country and to capture biometric data.

When an ID card is issued, a fingerprint is stored with the data from the household registration. It is combined with the civil registration database and the birth, death, and movement databases. In 1987, people could be issued ID cards in any district office, in any registration office in 15 minutes. The fingerprint and photo were kept for verification when the person needs a new ID card.

Now that every registration office of Thailand is online and computerized, the database is kept current by sharing information with other government agencies, such as the Passport Division, the police, the healthcare system, and the social welfare. Every government and private sector agency uses the same ID number for individuals. The database contains over 100 government agencies, and more than 100,000 officers have



authority to read the database. More than 100 million transactions are carried out from the database per year.

The new ID card—the Thai smart card—was launched in 2006. It is used for authorization purposes. The private sector has no authority to read data from the database. Only the public sector has access to the database. The chip contains information on the cardholder. When the cardholder goes to the private sector, he or she can read the data from the database. Many private sector entities, such as banks, use software to interface with these chip cards.

María del Carmen Tamargo, Independent Consultant, Argentina, focused her remarks on three main points: legal identity as the first step in building citizenship, as violations to legal rights can hinder the development of human, social, and productive capital in a society; legal identity as a crosscutting issue that affects a person through their life, as legal identity has different implications at different stages of life; and identity management policies, which in turn are a crosscutting priority in managing sectoral social policies, since legal identity management, together with social policies, can ensure citizens' access to rights in

childhood and restoration of violated rights in adulthood.

If legal identity is not ensured, a series of documentation problems can arise and follow people throughout their lives. Moreover, these problems tend to reproduce within families, exacerbating social, economic, and cultural exclusion as a consequence of violation of legal rights. Inequality in access to legal identity can have negative consequences for the enjoyment and exercise of rights. During the childhood and teenage years, if the identity of children, youth, and adolescents has not been registered, they cannot have access to healthcare, education, or social services that the State provides for the first stages of their lives. If adults have not registered their identities, it is very difficult for them to get a job, obtain a loan, or rent or buy a home. Without proper identification, the elderly cannot access the social services provided through the retirement and pension systems and other social services designed to support them.

Once it is recognized that the lack of identity affects people throughout their lives, identity management policies can be developed. They must be crosscutting and must be coordinated with sectoral policies.

In order for identity management policies to be effective, they must be linked to other government actions. As the experience of Latin America and the Caribbean shows, identity and identification can be a pivotal theme in allocating government resources and improving efficiency, effectiveness, and transparency in resource allocation.

Collective efforts are needed to effect changes and improve the efficacy and transparency of resource allocation. Action is needed to narrow the gap in access to legal identity and break the intergenerational cycle of documentation problems within families. As the experiences of Chile, Uruguay, and other countries have amply demonstrated, when building national databases, data become key resources. It is also very important to disaggregate data by gender.

More progress is needed in promoting the unique ID number, which will provide much-needed data for resource allocation, administration of social services and benefits, development of consultation services and identity validation and authentication services, while ensuring the safety and privacy of citizens.

Because identity documentation and identification affect people differently at different stages of their lives, there are specific policies for each life stage that can be effectively linked to identity management policies. One social policy model used widely throughout the world is the conditional cash transfer program. These programs provide a minimum income to indigent families with the aim of developing human capital and breaking the cycle of poverty. However, to access this benefit, the identities of women and children must be registered and maternal affiliation duly recorded. Another example of an age-specific benefit, Bolivia's "dignity pension" for the elderly, also requires inter-sectoral coordination to meet the needs of people at different stages of their lives. Thus, identity and identification are the entry points to a wide variety of social benefits.

Clearly, to make inter-sectoral coordination possible, it is vitally important to improve interoperability, since responsive, safe, and efficient

mechanisms are necessary conditions for implementing authentication mechanisms and validation strategies and for granting social benefits. There has been considerable progress in incorporating technology into identification systems, but it has always occurred within the context of institutions that have their own history, culture, and procedures. Improving inter-institutional coordination requires work on four key aspects: information management, social protection system management, knowledge management, and technology management. Integrating these four key aspects will enhance the design and implementation of public policies aimed at improving governance.

Interoperability alone, however, is not sufficient; leadership and political will must also be strengthened in order to push forward inter-institutional coordination and promote changes in organizations. Similarly, it is strategically important to build technical leadership to enhance horizontal and inter-institutional coordination. Technology should be considered a catalyst for change. Working on all of these aspects together will lead to better governance and achieve higher levels of inclusion and equality.

QUESTIONS AND ANSWERS

A participant asked the panel to comment on the recent shift from documentary fraud to impostors using a genuine ID and to identity theft using a card belonging to another person. The panelist from Namibia replied that systems in her country are considered secure, although fraud and forgeries do occur. There is minimal identity theft, and there is a good system of fingerprints that can detect a person who was not issued an ID at the age of 16. Namibia has very good investigators and good working relationships with traditional leaders and church leaders. Those who are stealing identities of Namibians are usually attempting to acquire a passport. The NPRS is also linked to the passport system, which ensures that such cases are rare.

A participant asked whether identity documents are being supplied to immigrants, or non-nationals, as well as citizens in Namibia, in order to protect their rights. The panelist from Namibia replied that the Ministry of Home Affairs consists of two departments: the Department of Civil Registration and the Department of Immigration and Border Control. The Department of Civil Registration deals with the issuance of birth certificates, ID cards, marriages, death certificates, and their protection. When a visitor enters Namibia, the appropriate visa—a tourist, student, or employment visa—is issued for a period of no longer than two years. Non-nationals who can provide proof that they have remained in the country for more than 10 years can apply for a permanent residency permit. Once the permit is issued, they qualify for a non-Namibian identity card, which allows them to bank and perform other transactions requiring an ID. IDs are issued to refugees, but they are registered in a different database. In Thailand, more than one million non-nationals enter from neighboring countries to work. The government generates the population ID for them, but the numbers begin with 00, indicating that they are non-Thai. Biometric data are collected from them and an ID card is issued, with a work permit on the back of the card. The Trade Department is integrated with the ID system, making a one-stop service.

A participant asked the panelist from Thailand whether Thailand has a centralized ID card

printing process. He asked about the workflow, how digitization is validated, and whether providing a printing facility in every registration center raises the risk of mismanagement. The panelist replied that the first time ID cards were issued from the database, using centralized printing, they took more than two months to produce and send back to the registration offices. Moreover, it was more costly for people to have to appear twice at the registration office. Fingerprints and other data are checked to authenticate identities and avoid fraud.

Key Lessons and Recommendations

- In view of the growing importance of ID cards in modern life, there is a need for a knowledge base, standards, and recommendations on how to design and manage identification and authentication systems, such as those that exist for civil registration, to guide countries in establishing or upgrading their systems.
- Integration of all civil events under a single agency has improved the administration and management of identities dramatically; the possibilities of defrauding birth, death, ID, and passport records is vastly reduced.
- More development is needed in institutionalizing the unique identification number by using it across the government agencies, which is a fundamental attribute for public sector resource allocation, administration of social services and benefits, and identity validation and authentication services, while ensuring the safety and privacy of citizens.
- Establishing a well-functioning ICT environment is crucial for timely registration.
- Developing proprietary software, or homegrown system, that is, developing the software in the country where it will be used may prevent dependence on a specific vendor to support the registration process. However, it is important to analyze the cost and maintenance of the investment up front.

SESSION 7

Civil Registries and Their Importance for Vital Statistics

A universal and well-functioning civil registration system plays a vital role in producing high-quality vital statistics, which are the essential underpinning of a national statistical system.

CHAIR

Peter Harper, Deputy Australian Statistician, Population, Labour, and Social Statistics Group at the Australian Bureau of Statistics (ABS). He has worked at the ABS for almost 30 years. Among other things, he is responsible for the ABS health statistics. He has occupied other senior positions at the ABS, including chief operating officer and head of economic statistics. Mr. Harper also worked for three years at the International Monetary Fund (IMF) on balance of payments issues. He was a member of the Government 2.0 Taskforce, the State of Environment 2011 Committee, and the National Sustainability Council. Mr. Harper is also actively involved in international statistical issues, including recently chairing the United Nations Committee of Experts on Environmental Economic Accounting.

PANELISTS

Carla AbouZhar, Chief Executive Officer of CAZ Consulting, an independent consulting company specializing in public health statistics, strategy, and policy. Ms. AbouZhar was employed at the World Health Organization (WHO) in Geneva for over 20 years prior to her retirement in 2011. She was responsible for the annual flagship publication *World Health Statistics* and developed the WHO *Global Health Observatory*, an initiative designed to enhance the use of standards for indicators and metadata across the Organization. She has many years of experience in program monitoring and evaluation, with particular attention to strengthening routine health information and civil registration and vital statistics systems. Since her

retirement, she has provided consultancy support to WHO, UNICEF, GAVI, UNESCAP, UNECA and the University of Queensland. She has academic qualifications in Statistics from the London School of Economics and in Health Systems Management from the London School of Hygiene and Tropical Medicine.

Keiko Osaki-Tomita, Chief, Demographic and Social Statistics Branch, United Nations Statistics Division. In this capacity, Ms. Osaki-Tomita leads the global collection and dissemination of demographic and social statistics and develops the standards and norms for statistical activities in these areas. Her responsibilities include overseeing the Global Civil Registration and Vital Statistics Programme and the World Programme on Population and Housing Censuses, under the auspices of the Statistical Commission. She also serves as a lead author of the annual Global MDG Report, coordinating the inputs of the UN agencies for the publication. Prior to this position, she was Chief, Social Policy and Population Section at UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific) in Bangkok, Thailand, and Chief, Migration Section of UN Population Division at the UN Headquarters in New York. She holds a Ph.D. in Sociology from Fordham University and a Master's Degree in Demography from Georgetown University.

Maletela Touane-Nkhasi, Executive Manager, Health and Vital Statistics, Statistics South Africa. Ms. Touane-Nkhasi's main responsibilities include strategic leadership in the acquisition, processing, analysis, and dissemination of statistics covering health, international population movements, and vital events from the South African civil registration system. She is also involved in a range of activities aimed at improving civil registration and vital statistics systems in South Africa. Prior to this position, she was a senior lecturer in demography at the National University of Lesotho. She holds a Ph.D. in Social Statistics from the University of Southampton, United Kingdom; a Master's Degree in Population Studies from the University of Ghana; and a Bachelor's Degree in Statistics and Demography from the National University of Lesotho.

Lisa Grace Bersales, National Statistician and Civil Registrar General, Philippines Statistics Authority. In this role, Ms. Bersales prescribes the agency's rules and regulations, instructions, schedule, and form of business in the collection, compilation, and dissemination of statistics and other information. As Civil Registrar General, she provides the overall direction of the implementation of the Civil Registry Law and has technical supervision over the local civil registrars. Before assuming the role of National Statistician, she held various posts at the University of the Philippines (UP), where she has been on the faculty for more than 30 years. She served as the director of Graduate Studies of the UP School of Statistics in the late 1990s

and dean of the UP School of Statistics from 2002 to 2008. From 2001 to 2014, she was the Vice President for Planning and Finance of the University of the Philippines System. She holds Baccalaureate, Masters, and Ph.D. degrees in Statistics from the UP School of Statistics.

Yeanok Yoon, Director, Vital Statistics Division, Statistics Korea. In this capacity, she manages the Vital Statistics (VS) System, which records births, deaths, marriages and divorces, and the production of vital statistics in Korea based on the VS system. Ms. Yoon previously worked at the Social Trend Analysis Division of Statistics Research Institute and Sampling Division of Statistics Korea. Currently she is a member of the board of directors of the Population Association of Korea. Previously she was editor of the Journal of the Korean Statistical Society (JKSS). She holds a degree in Statistics from the University of Florida.

INTRODUCTION

Peter Harper, Deputy Australian Statistician from the Australian Bureau of Statistics, introduced the session by underscoring another important use of civil registration—its key role in vital statistics. The fact that countries with the highest rates of civil registration tend to rank highest on the Human Development Index suggests that civil registration is an essential aspect of a well-functioning society, and that a well-functioning society recognizes the importance of civil registration. Moreover, countries with well-developed civil registration systems tend to have well-developed statistical systems, in large part because of the benefits that their statistical systems gain from the civil registration systems. In countries with well-developed statistical systems, both the public and the private sectors make better decisions because of the availability of high-quality evidence, enabling governments to be held to account.

Mr. Harper defined vital statistics as "the essential statistics about a nation's people." Vital statistics underpin the estimates of a nation's population, which is critical for establishing and monitoring development goals. Vital statistics provide critical information about the health of the population, including infant mortality, maternal mortality, life expectancy, and preventable deaths. They are also critical for infrastructure planning and the delivery of services to citizens, particularly schools and hospitals. Vital statistics tell us about the fabric of societies, including such life events as marriages, divorces, and adoptions. The purpose of this session is to explore the legal, institutional, coordination, resource, and capability challenges that must be overcome in order to collect, compile, and disseminate accurate, timely, and reliable vital statistics.

In her remarks, Carla AbouZhar, CEO of CAZ Consulting, made four major points. First, civil

registration is designed to provide legal documentation to individuals and is also the primary source of vital statistics for countries at the national and subnational levels. These vital statistics are essential for governments to know the populations for which they are responsible. Second, while countries may have good civil registration systems, this does not necessarily always translate into good vital statistics. However, it is an essential starting point to achieving high levels of coverage of registration of vital events, particularly births and deaths.

Third, she illustrated some of the key uses of vital statistics, looking mainly at the MDGs but also at an example from the health sector in particular. Fourth, the momentum for change is accelerating.

Information on the distribution of countries by coverage of birth and death registration, starting with birth registration, shows that of the 192 countries in the world, just over 55 percent have complete birth registration rates of 90 percent or more. Countries with between 50 and 89 percent birth registration have a civil registration in place but do not have complete coverage. The remaining countries have either very low levels of coverage of civil registration or no birth registration data at all.

Rates of death registration are somewhat more worrisome. Only a third of countries capture a sufficient number of deaths to be able to use that information as the basis for vital statistics. It is therefore important to come up with ways to encourage greater death registration.

Most of the countries that have low levels of coverage of civil registration are in Sub-Saharan Africa and South Asia, although there are examples of progress in southern Africa. This is not to say that only wealthy or middle-income countries can afford to have good civil registration systems. However, high levels of birth and death registration are a prerequisite for development.

Ms. AbouZhar noted that people living in poor households are the least likely to be registered. In information compiled on a wide variety of countries, including Sudan, Senegal, Indonesia, Kenya, Nigeria, India, Tanzania and Pakistan, the gradient is the same: the poorest households have the lowest level of registration coverage, while the richest households have the highest level. In Sudan alone, 90 percent of the richest 20 percent of households—the richest quintile—register their births, compared with fewer than 10 percent in the poorest households. This matters, because average coverage of birth registration cannot increase unless the barriers that prevent these poorest families from accessing registration—lack of infrastructure, distance from registration centers, or sociocultural factors—are addressed.

Another problem is late registration. The Convention on the Rights of the Child and the UN recommendations specify that children should be certified as soon as possible after birth. However, many children are not registered within the first year after birth, and this has important legal, personal, and statistical implications. Chiefly, it means that civil registration systems are not capturing these children at a period of life when they are most vulnerable.

Still another problem with vital statistics is that they are often not timely. Only about half of all countries report their data within one or two

years. This is problematic because unless governments have timely information, the data are of little use to them for decision-making and policy.

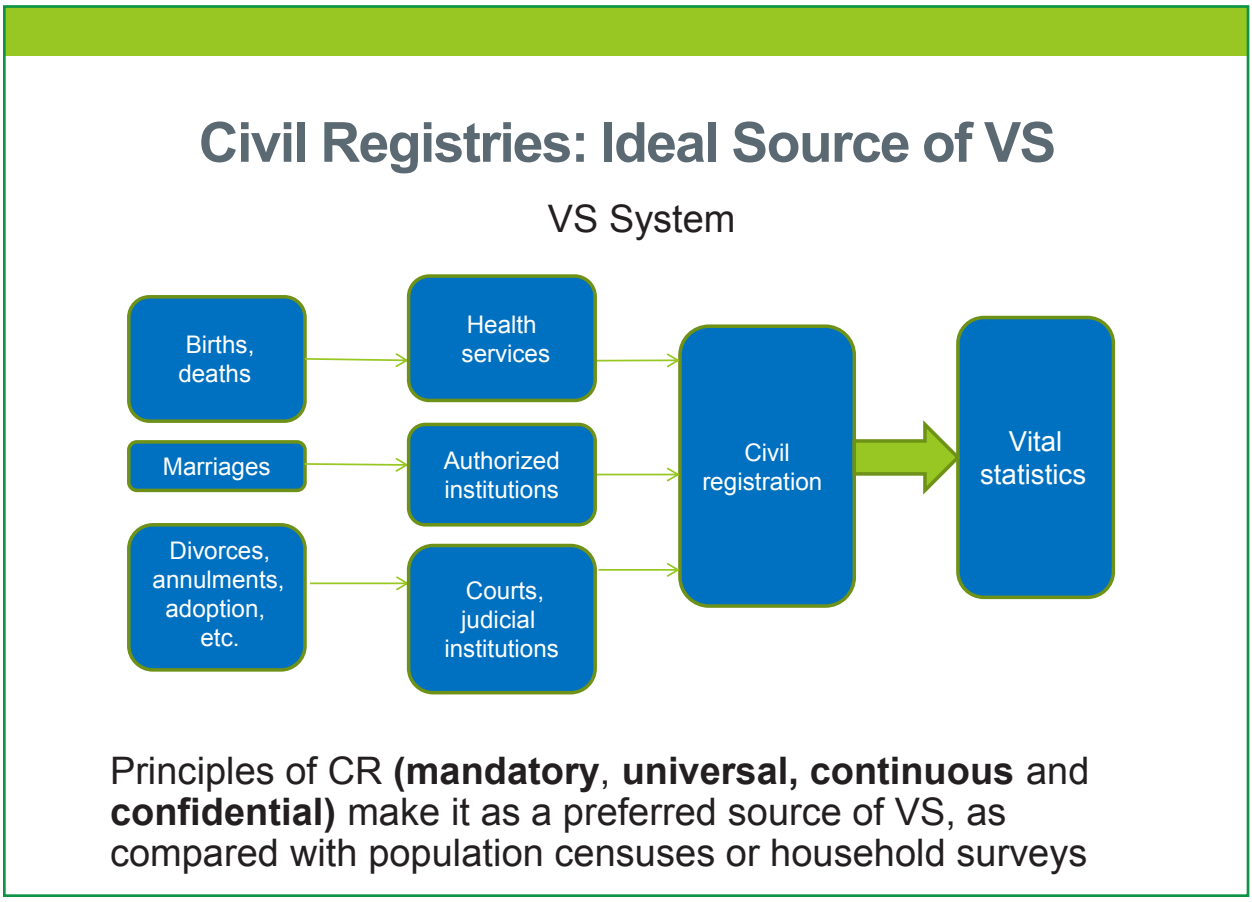
Ms. AbouZhar also touched on the use of vital statistics in measuring countries' progress toward the Millennium Development Goals (MDGs). Countries use many different sources to come up with information to meet the indicators of the MDGs, including household surveys and census data. However, there is a strong argument to be made that the only truly satisfactory source of data for monitoring the MDGs is the civil registration system. All other sources are suboptimal, especially when it comes to generating data at the subnational level.

Another important use of vital statistics is to raise awareness about trends. For example, vital statistics charted trends in lung cancer mortality in a number of countries, including the Australia, France, Japan, Sweden, and the United States, starting in 1950. The increase in lung cancer mortality in all of these countries occurred because during World War II, men were strongly encouraged to smoke and received cigarettes in their rations. It was only gradually that the public became aware, through a number of studies on the rising trends in lung cancer mortality, of the impact of smoking on mortality. This led to the first public health interventions, legal cases against tobacco companies, cigarette price increases, smoking bans, and advertising bans. Today, lung cancer mortality is declining.

Ms. AbouZhar concluded by noting the growing momentum for change. A number of countries in the Asia-Pacific region have completed assessments of their civil registration systems and are in the process of developing investment plans and plans for improving civil registration. It is important to seize this moment. In the Post-2015 Development Agenda, there will be increased demands on statistical capacities, which will make civil registration—and vital statistics—more important than ever. Information and communication technology has the potential to improve registration and vital statistics, and there is the immense driving force of the need for good governance, associated with sound legislation that looks at identity management from a human rights perspective.

Keiko Osaki-Tomita, Chief of the Demographic and Social Statistics Branch of United Nations Statistics Division, began her remarks by explaining why statisticians care about civil registration. She noted the stereotypical claim of statisticians as "boring people and maniacs who enjoy number crunching," and then quoted the chief economist of Google, who said that "being a statistician is the sexiest job in the 21st century" because of the growing demand for statistical data in the coming years. Statistics are widely recognized as essential for decision making and evidence-based policymaking in any sector of society. In particular, vital statistics provide critical information on the population of a country: number of births, deaths, marriages, and divorces—events that touch the heart of society.

Ms. Osaki-Tomita said that different vital events of concern to the authorities should be administered or coordinated by a centralized national agency, and that agency should facilitate the production of vital statistics. Because civil registration, in principle, calls for mandatory registration, universal coverage, and continuous recording of the information in a confidential



manner, it is an ideal source of vital statistics. When it functions well, the system can provide vital statistics routinely—probably annually—at both the national and the subnational levels. In the long run, CRVS can be very cost-effective compared to other statistical exercises, such as censuses or surveys.

There are still some missing links between civil registration and vital statistics systems, and having a good civil registration system does not necessarily mean that it will provide good vital statistics. The production of good vital statistics is often hampered by, among others, the lack of legal provisions that demand collection of statistics from civil registration system, lack of awareness of the importance of the vital statistics, and lack of coordination between civil registration and vital statistics systems.

Modern technologies can expedite procedures, increase the adequacy of information, and possibly reduce the workload of agencies. But technologies alone are not enough to guarantee the overall improvement of CRVS. A holistic approach is needed.

Ms. Osaki-Tomita underscored the importance of political commitment at the highest levels for implementing the system, a time-bound action

plan with measurable targets and a set of activities, and a cost plan for improvement. Advocacy efforts are needed to garner the support of decision makers who may not be aware of the barriers in the CRVS system. Infrastructure for CRVS administration can be improved by creating coordination mechanisms among various stakeholders. It is essential to raise public awareness about the benefits of registering vital events. Raising awareness will create demand for legal documents and statistical outputs, which will in turn force the system to respond better. Service delivery needs to improve by providing registration free of charge, on-site certificates, and so forth. Last but not least, investment in human resources is needed to keep pace with technological advances.

A number of UN offices and agencies are undertaking a wide range of activities in a decentralized manner, depending on their mandate and their field of expertise. Within the Secretariat, three other offices besides the Statistics Division work on CRVS. The United Nations Population Division (UNPD) assesses vital statistics and uses the information to conduct population projections and estimates. Every Woman Every Child (EWEC), an initiative launched by the Secretary General in 2010, addresses the major health challenges facing women and men, and its recommendation for countries points to the need for functioning systems to register key vital events. Outside the Secretariat, UN Regional Commissions are regional platforms that place CRVS at the center of development issues. They play an advocacy role regarding the importance of CRVS and build networks of stakeholders at the regional level. Some regional commissions, such as ECA, ESCAP, have recently organized ministerial conferences on CRVS and honor their commitment to this issue in the form of action frameworks.

UNICEF is a specialized agency that promotes the registration of births from the viewpoint of safeguarding children's rights. UNICEF supports governments in developing effective birth registration systems and examines the level of birth registration using survey data. The World Health Organization works to improve health information and health information systems of countries. It compiles and assesses the data on mortality and causes of death as reported by civil registration systems of member states. The World Bank finances and provides technical assistance for the implementation of national strategies to strengthen CRVS and national identity systems. There is a recent initiative to form a Global CRVS Group to form a strong alliance among all of the disparate organizations and act as a single UN entity to promote the advancement of CRVS systems in countries.

The United Nations Statistics Division has been engaged in the work of CRVS for a long time. Its mandate includes setting international standards and methods on statistical activities. It produces the book entitled Principles and Recommendation for Vital Statistics Systems as well as a series of technical materials for use by governments that are trying to update their systems. The Division also has a well-established data collection mechanism through direct communication with national statistics offices of member states. Vital statistics offered by member states have been compiled and disseminated through the system called Demographic Yearbook or the publication Population and Vital Statistics Report. It distributes vital statistics in both print and electronic form. It organizes workshops and seminars for national

statisticians and registrars to increase their knowledge and understanding of contemporary vital statistics systems. All of the technical materials produced or collected are available at the Division's online system, CRVS Knowledge Base.

Maletela Tuoane-Nkhasi, Executive Manager in charge of Health and Vital Statistics of Statistics South Africa, discussed ways that statisticians use data from the civil registration system in South Africa. The South African Civil Registration System covers all ten vital events except judicial separations and publishes data on four of them. It publishes annual reports on births, deaths (including causes of death), marriages, and divorces. The completeness of the civil registration system is relatively high in South Africa: 85 percent of births were registered in 2012, and about 94 percent of all deaths were registered in the period 2007–11. The four key departments responsible for CRVS are the Department of Home Affairs, which is responsible for the registration of births, deaths, and marriages; the Department of Health, which is primarily responsible for verifying the occurrence of births and deaths and providing information on the causes of death; the Department of Justice and Correctional Services, which is responsible for compiling data on divorces; and Statistics South Africa, which produces vital statistics from all these civil registration events.

Ms. Touane-Nkhasi highlighted the importance of civil registration from the standpoint of its usefulness. The entry point is the registration of births, from which a National Population Register is created. The National Population Register enables verification of all of the details of the individual. The identification system is linked to the National Population Register. It issues ID books, passports, and immigration certificates. The National Population Register also houses ID numbers and personal details of all people registered within the registration system. The end product is vital statistics, once all these data are collected.

Civil registration is also related to access to social services in the country. Social grants have had an impact on the registration of births in the country. Child support grants require a birth certificate or identity document of the parents, which has had an indirect impact on birth registration. Identification documents are required to access poverty alleviation programs and housing for indigent people, which has increased registration. With regard to education, every pupil in the country is required to have a birth certificate when they start school, and when they write their final examinations in high school they are expected to have identity documents because all citizens are issued an identity document at the age of 16. All of this has had an indirect impact on registration rates.

Access to finance requires an identity document. Major banks in South Africa are linked to the National Population Register for the verification of authenticity of the identity document that is presented.

With respect to the improvement in birth registration rates over time, in 1992, less than 600,000 births were registered, but immediately following the introduction of the child support grant in 1998, there was an increase particularly for births registered on time. The main impact was the timeliness with which births were registered.

The vital statistics gathered from the civil registration systems are used for monitoring MDG

goals 4 and 5. With data from civil registration, it is possible to monitor the infant mortality rate, the child mortality rate, and the maternal mortality rate. The system was also used to measure some indicators of the health sector's negotiated service delivery agreements between 2010 and 2014. Because the information is timely and continuous, information can be provided on an annual basis. From the causes of death information, which is also available on an annual basis from the civil registration system, it is possible to provide disease profiles at national as well as subnational levels. This has enabled the government to determine public health priorities through identification of the most pressing health issues that have been observed on a continuous basis.

Civil registration in South Africa has been particularly useful in the measurement of the maternal mortality ratio. In the country there are several estimates provided for maternal mortality, based on different data sources and different methods of analysis. The civil registration system is able to track maternal mortality annually based on the same data source and the same method of analysis, which enables an analysis of the direction of trends over time. The civil registration system is also able to track traffic accidents at the provincial/subnational level. For example, the system was able to show that the province of Limpopo has higher mortality rates due to traffic accidents. Year-to-year changes can be tracked and specific programs channeled to those areas that are showing specific problems.

Statistics South Africa also uses civil registration information for the production of annual population estimates. It provides annual demographic data and basic population dynamic statistical information on a continuous basis and at subnational levels. The office has also used civil registration data to evaluate census data. For example, it is able to compare information from the civil registration system on proportion of deaths by natural causes and by age to the census data. Looking at patterns provides some confidence that census data can provide information on natural and non-natural causes of death.

Ms. Touane-Nkhasi concluded her remarks by noting that the importance of civil registration has been recognized globally and regionally. Civil registration is the most sustainable and cost-effective system, which provides benefits at the individual, community, and country levels. She called for continued advocacy for improvements in civil registration and production of vital statistics in order to ensure the quality of the systems.

Lisa Grace Bersales, National Statistician and Civil Registrar General of the Philippines Statistics Authority, described the experience of the Philippines in CRVS, focusing on organizational coordination and administrative arrangements, which she sees as the strengths of CRVS in the Philippines.

The population of the Philippines in the 2010 census was 92 million and is projected to reach 109 million in 2015. The Philippines Statistics Authority is the repository of the civil registration database. The Philippines has a strong legal framework for civil registration. In the Civil Registry Law of 1931, civil registration was made compulsory, with the Director of the National Library serving as the Registrar General. In 1940, the Bureau of Census and Statistics was created, and its director was designated as the ex officio Civil Registrar General. The Philippines Statistics Authority, which merged four major statistical

agencies—the former National Statistics Office, the National Statistical Coordination Board, the Bureau of Labor and Employment Statistics, and the Bureau of Agricultural Statistics—was created last year. The Philippines Statistics Authority is the youngest government agency in the Philippines, and its organizational structure is still forming.

In addition to the legal framework mentioned above, a number of laws addressing the needs of special groups and special situations have been passed. Some allow for accommodation of cultural practices of indigenous peoples or for Muslim Filipinos who require immediate burial of their dead. Others emphasize non-disclosure or confidentiality of birth records. There is a Domestic Adoption Law, laws that allow for quick, efficient correction of errors in birth certificates, and a law requiring death certificates for burial.

The government has put in place IT infrastructure for computerized civil registration through a public-private partnership, which began with the aim of improving frontline services. The government issues birth certificates, death certificates, marriage certificates, and certificates of no-marriage using security paper in order to ensure the authenticity of the documents. The private partner developed the IT infrastructure for digitization of all of these documents and quick release of requested documents as well as some online facilities for some outlets.

Another good practice in use in the Philippines is strong coordination mechanisms with stakeholders, including civil society organizations and international organizations. Inter-agency committees have been created to discuss issues surrounding civil registration and vital statistics.

The Philippines does not have a national ID card; instead, it issues a multipurpose ID specifically for e-government and for citizens to access health insurance, social services, housing, and other important government services. However, there are separate registries of different government agencies, such as for senior citizens, and the National Household Targeting System, which is the registry for poverty alleviation.

The Philippines Statistics Authority (PSA) has a Civil Registration Division in charge of administering civil registration and producing vital statistics. Births and marriages are registered through a network of local civil registrars, who administratively fall under the mayors of the 1,500 municipalities in the Philippines but under the technical supervision of the PSA. The PSA provides training on the different civil registration laws. Civil registration is conducted by local government units, and the documents submitted to the PSA, which maintains the civil registration database, are then digitized. Those who request documents are given security paper documents. The PSA sponsors activities to promote CRVS. February is designated CRVS registration month. The PSA also conducts mobile registration, traveling to remote areas. It holds two biannual workshops: one for local civil registrars and one for solemnizing officers. The Department of Health of the Philippines, a close partner, provides capacity building for health professionals to properly certify births and deaths.

The dual mandate of the Philippines Statistics Authority—serving as both a statistical office and a civil registrar's office—works well because it enables the PSA to streamline processes and standardize and provide better quality CRVS data. It also enables the PSA to introduce innovations

faster, have more cost efficiencies, and generate vital statistics in a timely fashion, although there is still room for improvement.

Ms. Bersales said that there are still challenges in registering marginalized sectors, but there are also opportunities: the government has increased its budgetary support, because the current president favors using empirical data for policymaking. PSA plans to renew its public-private partnership in order to introduce more innovations. It will adopt the seven action areas of the Direct Regional Action Framework on Civil Registration and Vital Statistics in Asia and the Pacific, for which a ministerial-level meeting is planned for November 2014. An investment plan, drawn up in consultation with stakeholders, is in place, and the PSA will soon review the Philippines Statistical Development Program, which includes programs for CRVS.

Yeanok Yoon, Director, Vital Statistics Division, Statistics Korea, began her remarks by providing a brief history of CRVS in Korea. The Rules of Vital Event Survey, established in 1937, was the first legal basis for data collection of vital events for statistical purposes. In 1962, the Statistics Act and the Enforcement Decree of the Statistics Act, and the Vital Event Survey were established. In 1970, the Family Registration Items and Vital Events Items were integrated into one registration form with two parts. The first part belongs to the Family Registration System, and the second part belongs to the Vital Statistics System. In 1980, the first Annual Report on Vital Statistics was produced. In 1983, the Annual Report on Death Statistics and the Causes of Death was released. In 1997, the Electronic Local Office Entering System was established, which allowed local offices to enter data on the spot where the people registered their vital events. In 2004, the Vital Statistics System was developed into the Web-base Entering System, integrated with the Family Registration System.

Ms. Yoon described the process used in the Family Registration System and Vital Statistics System. When the documents of vital events are submitted to the local offices of cities, counties, and districts, the family registration items are first input into the Family Registration System. The data entered are sent to the Supreme Court of Korea, and names and addresses are also sent to the Vital Registration System. These items are integrated with the other vital items, which belong to the second part of the registration form, and are submitted to Statistics Korea for vital statistics production. The Family Register is the basic register for the population of Korea, and births and deaths are legally effective when they are entered in the Family Registration System.

The legal basis for the Family Registration System is the Act on the Registration of Family Relationships administered by the Supreme Court of Korea. This Act describes matters concerning the registration of the establishment or change of family relations such as births, marriages, divorces, and deaths, and certification thereof. The legal basis for the Vital Statistics System is the Statistics Act and Enforcement Decree of the Statistics Act. It provides basic data required for establishment of policies on national population, housing, public health, and education by identifying the factors that change the size and structure of a population, such as birth, death, marriage, and divorce. Since the registration of vital events is mandatory in Korea, reported vital events are virtually complete surveys.

When citizens submit the documents of vital events, local governments receive and check the documents and enter the data into the Family Registration System and the Vital Statistics System. After that, data crosscheck is done through a checking algorithm. Statistics Korea compiles, edits, analyzes, and releases the vital statistics. Citizens are required to submit birth and death documents within one month of the event. Marriage documents have no time limits, except for marriage by court judgment, which must be submitted within one month. Divorce documents must be submitted within three months of the mutual consent and within one month of the court judgment. Vital statistics are announced monthly and annually. To compile cause of death statistics, Statistics Korea uses death registration information and 21 other administrative datasets from 13 agencies, including the National Cancer Center, the Public Health Center, and the National Police Agency.

Birth and death information entered into the Family Registration System is also connected to the Population Registration System, which falls under the Ministry of Government Administration and Home Affairs (MOGAHA), Korea. The Ministry collects internal migration information. Statistics Korea receives internal migration information from the Ministry Public Administration monthly to produce migration statistics. MOGAHA also creates the unique residence ID numbers upon receipt of birth registry information. Population projections are made every five years using census and vital statistics data.

Ms. Yoon provided some facts about Korea derived from vital statistics data. The birth rate is decreasing. In 2013 the total fertility rate was 1.19, among the lowest in the world. Since the 1970s, the marriage rate has increased, but today it is decreasing. The divorce rate was low in the 1970s and 1980s, but today it is high. Cancer is the number one cause of death. From the 1980s to the early 2000s, the sex ratio was too high. Now, the concern is how children will be able to get married, given the shortage of females.

QUESTIONS AND ANSWERS

In response to a question about how to measure under-registration other than the UNICEF surveys, a panelist said that surveys are only one approach. The other approach is a demographic approach, which is to count the number of events that are registered and then estimate the total number of expected events. Another panelist said that there are direct and indirect techniques for measuring under-registration, each with its own limitations and strengths. There is no standard way to measure incompleteness from a technical standpoint. Thus, figures given for under-registration may not be reliable or comparable between countries. More standardization and comparability are needed.

Responding to a question about how countries in conflict could increase their birth registration rates, a panelist responded by noting that the issue is not conflict per se, but socioeconomic differentials. In Sudan, for example, the richest households have the highest levels of coverage of birth registration, and in all the other income quintiles in Sudan, there are low levels of coverage—less than 10 percent. Sudan is one of the countries that demonstrate the widest gaps in terms of socioeconomic differentials between those who are registered and those who are not.

A participant noted that in addition to economic barriers, there are cultural barriers to birth registration, as many communities resist providing reports to the State, going to the hospital when they are sick, paying taxes, going to the customs administration, voting, or reporting burials of their dead. A panelist agreed that there is a strong cultural dimension. Some people feel that the registration system is a government imposition rather than something designed to serve their needs. It is important to target every individual citizen and to work closely with communities to demonstrate the benefits to be gained from registration, specifically the empowerment to function in a modern society that registration confers. The Philippines harnesses all stakeholders to advocate for universal registration. Commissions such as the Commission on Indigenous Populations, the Commission on Muslim Affairs, and civil society organizations all advocate for registration. Still another panelist, commending the progress made by the Philippines, stressed the importance of working with communities to improve coverage of birth registration.

A participant asked how a national identification database differed from a national population register and whether it is possible to compile statistics from the national population register. A panelist replied that South Africa has basically one system: national identification is covered through the national population register, run by the same government department. Whether it is called a national identification system or a national population register, everyone at the age of 16 receives an ID card.

In response to a question about why South Korea had conducted a population-based census, a panelist responded that in 2015 or 2016, Korea would conduct a register-based population survey. Currently, the national ID database is linked to other administrative data, especially migration data, as well as immigration, health, and administrative data. The register-based census is only for the short-form census: Korea administers the long-form census to 20 percent of the population, which increases the accuracy of the census data.

Some panelists emphasized that the demand for better data is increasing, as are demands to better track the coverage of birth registration, identity management systems, and civil registration. It is incumbent on the UN System globally and regionally to improve ways to monitor progress.

Key Lessons and Recommendations

- Civil registration and vital statistics should be treated as complimentary systems. This requires strong cooperation between civil registrars and official statisticians, as well as other players whose contributions should be coordinated in order to develop timely civil registration and a high-quality vital statistics system.
- To overcome cultural barriers to registration and to providing personal information to the State, governments and other stakeholders must do a better job of explaining the benefits of registration, specifically its role in empowering people to participate more fully in the modern world.
- Efforts should be made to standardize measurement of under-registration of births to increase accuracy and make the figures comparable across countries.
- Attention should be paid to cultural barriers that may exist to timely registration, or registration at all.
- In view of the likely increase in demand for better data, especially in the post-2015 Development Agenda, the UN System both globally and regionally should improve ways to monitor progress on birth and death registration and the quality of vital statistics.

SESSION 8

Interoperability Between Civil Registration and Civil Identification

Interoperability between the civil registry and civil identification can have a direct impact on social development, as States can provide improved services to citizens and customers through cooperation, integration, and exchange of information and knowledge. The panel presented best practices in overcoming the operational challenges associated with linking civil registration with civil identification in order to guarantee a unique legal identity for all.

CHAIR

Rudy Gallardo, Executive Director of the National Person Registry (Registro Nacional de las Personas RENAP) in Guatemala. Mr. Gallardo holds a Bachelor's degree in Informatics System Administration and a PhD in Penal Science. He has been invited as a panelist on many occasions to talk about the institutional reengineering process and management model. Currently, he is on the Board of the Latin American Council on Civil Registration, Identification, and Vital Statistics (CLARCIEV). Mr. Gallardo also has experience in public and citizen security, as well as informatics procurement and project management.

PANELISTS

Young-Kun Joung, Chief of Resident Registration Information Center, Ministry of Government Administration and Home Affairs (MOGAHA), Korea. Prior to his current position, Mr. Joung was in charge of managing the local government personnel and recruitment management system at MOGAHA. While working at the Government IT Training Center, he managed content development projects for online tutorial programs for government officials. During his service in the e-Government

Support Division, he integrated the local government IT system for government use. Mr. Joung holds a Bachelor's Degree in Information Statistics from the Korea National Open University.

Aime Gerard, Director-General, Civil Registration Department, Burkina Faso. Mr. Gerard is providing support to the quality evaluation of the civil registration system for the Republic of Burundi. He was the head of the Mobile Birth Registration Program and the project manager for implementation of the civil registry and management integrated system. He is an expert in marital status and a member of the African Civil Status Experts Group. Mr. Gerard is a geographer and holds a Diploma in Civil Administration from the National School of Administration and Magistracy.

Zakaria Bin Awi, Deputy Director General, ICT, National Registration Department (NRD), Malaysia. In 2003, he became the IT Director of NRD. He has served in the NRD since 1990, when it began implementing computerization projects and he was appointed System Development Manager. In 1998 he was appointed Technical Manager for the Malaysian Government Multipurpose Smartcard (MyKad). Prior to that, he served in a number of public service positions, including System Analyst at Public Service Department and Senior System Analyst at the Ministry of Education. He holds a Bachelor's Degree in Computer Science from Science University of Malaysia and a Master's Degree in Information Technology from MARA University of Technology.

Luis Guillermo Chinchilla, Director, National Registry, Costa Rica. Mr. Chinchilla has more than 20 years of experience in the Supreme Electoral Tribunal of Costa Rica in the administrative and legal management areas, specifically in Administrative Law and Administrative and Public Procurement. In recent years he has held the position of General Director of Civil Registration and has also been the Electoral Legal Advisor for this agency. He coordinated the accreditation of the International Quality Standard ISO 9001: 2008 for the process of registration of vital events, identity, naturalization, and the National Electoral Register. He is a member of the Committee of Legal Affairs of the Latin American Council of Civil Registration, Identification and Vital Statistics (CLARCIEV). He was a panelist at the Third Regional Course on Statelessness, sponsored by the United Nations High Commissioner for Refugees (UNHCR). Mr. Chinchilla holds a law degree from the University of Costa Rica.

INTRODUCTION

Rudy Gallardo, Director-General, RENAP, introduced the session by saying that the panelists would present best practices and ways to overcome some of the institutional challenges as well as some administrative measures that can be adopted to achieve interoperability. The purpose of interoperability is to ensure legal certainty of verification and authentication registration processes, certify unique legal identity, and harmonize structural and institutional differences to the benefit of citizens.

DISCUSSION

Young-Kun Joung, Chief of Resident Registration Information Center, Ministry of Government Administration and Home Affairs (MOGAHA), Korea, discussed the relationship between resident registration and identification verification. He explained the purposes of resident registration, authentication of identity, current problems, and future directions.

Mr. Joung explained that the Resident Registration System (RRS) of South Korea collects, records, stores, and processes all vital events from crib to grave, including birth registration, family relationships, and immunizations records. It also issues national identity cards when citizens reach the age of 17. Any services required, including healthcare benefits, death registration, and welfare, are completed through the RRS. Any administrative work that can be explained logically can be performed by the system. Thirty-one departments use the RRS to perform a total of 60 tasks. In South Korea's public sector, authentication of identities is a major responsibility of five departments. Identity authentication is possible using the national identity card (NIC) and the abstract of NIC issued by the Ministry of Government Administration and Home Affairs (MOGAHA), which oversees four types of identification: driver's licenses, issued by the National Police Agency; alien registration cards, issued by the Ministry of Justice; registration cards for people with disabilities, issued by the Ministry of Health and Welfare; and passports, issued by the Ministry of Foreign Affairs. Other ID's, such as student IDs issued by schools or company IDs issued by a company are not accepted as proof of identity outside of the issuing entity. The NIC has the holder's name, resident registration number, photo, address, issue date, expiration date, and the issuing authority's official stamp on the front side. The back side has an area where the holder's address can be recorded and instruction on what to do after acquiring the NIC. The driver's license shows the type of license, license number, the resident registration number, address, and dates of validity on the front side. Financial institutions and national institutions verify identities claimed by NIC through the Administrative Shared Utilization Center operated by MOGAHA. Civilians can also check the authenticity of the NIC online or by phone.

When attempting to coordinate administrative tasks, differences may arise between users and user institutions. When an individual dies, the death must be reported, and the succession of property must proceed. MOGAHA and the Ministry of Health and Welfare act independently of one another. Because different institutions are involved in the same case, there may be problems with the accuracy of the information. To resolve this issue, the Ministry of Health and Welfare operates a system called "e-Hanuel Jangsa" (e-sky funeral system) which registers the cause and date of death. Through this system, the Ministry

of Health and Welfare registers information on the death and communicates it to MOGAHA, which proceeds to discontinue pension and welfare benefits to the deceased.

It is important to avoid discrepancies in pension or welfare payments, or between the civil sector and the public sector's data collection systems. Part of the RRC's job is to reduce the number of discrepancies.

In South Korea, when a civilian visits a local or district government office, he presents his national identification card (NIC) for identity verification. The clerk scans the NIC in a reader machine to verify its authenticity. If the information on the card matches the information in the data center, the NIC is judged to be authentic and the clerk can proceed to provide the service or documents requested. In some cases, it has been discovered that forged NICs and fake documents are used in financial transactions. ID verification plays an important role in preventing this type of fraud.

In financial institutions, users must undergo the ID verification process to open a new bank account or withdraw funds. Before the advent of the computerized system, this was not possible. Now, however, to check the authenticity of the NIC, bank staff have card readers and if the information on the card matches the information in MOGAHA's data center, they can proceed with the financial transaction. An office called the Financial Authorization Center takes care of the intermediate tasks. Through verification of identities provided by the office clerks at government offices, crimes can be prevented.

When the information about the death of a citizen reaches MOGAHA, the information is communicated to financial institutions. Collecting these data in the most rapid and accurate way and sharing them with other ministries maximizes the efficiency of administrative tasks. Verifying NICs helps prevent abuse and crimes perpetrated by people using forged documents.

The RRS will continue to receive requests to maximize the efficiency of administrative tasks. It will actively respond by broadening connections and continuing to promote relevant laws and policies. Currently, the NIC is used for ID authentication, but the registration card for people with disabilities, the passport, and the domestic residence report cannot yet be verified through communication with MOGAHA. This is on the agenda for the future. Furthermore, MOGAHA will endeavor to use a personal certification document in place of the NIC.

Aime Gerard, Director-General, Civil Registration Department, Burkina Faso, focused on the operational aspects that are separating identification from civil registry. He explained that this issue became apparent in Burkina Faso after conducting a final institutional and organizational cycle of the Civil Registry Service and finding that civil registration records were vulnerable. That last cycle also showed that there was a high rate of identity fraud; consequently, certificates, diplomas, and identification documents were subjected to suspicion and criticism. With that in mind, Burkina Faso, through its government, decided to organize a civil registration integrated management system. This system includes territorial civil registration, that is, civil registration managed by the mayor; and consular civil registration, that is, civil registration managed in consulates and embassies.

In his presentation, Mr. Gerard focused on four key issues: an overview of the current status, the new legal and technological environment, the mature system architecture, and interoperability between the two systems.

The most urgent priority was to put an end to the status quo and move forward in meeting the required standards for a registration system. The first task was creating the appropriate legal environment. In 2004, Burkina Faso passed a law on personal data protection. There is also a law that authorizes the creation of a unique identifier for every citizen in the civil registry.

An integrated system that uses new technologies requires the appropriate support to carry the information. The government set up the fiber-optic architecture to exchange information between the different civil registration centers. Before setting up the integrated management system, the system did not have the capacity to interface between identification services and the civil registry. When an individual requested his/her identification document, the agent could only consider the person's certificate to be right or wrong based on personal judgment. There was no mechanism for the various identification services—the National Identification Office, which issues national identity cards, and the Passport Service, which issues passports—to verify identity.

This technology was put in place to strengthen data and ensure the reliability of the information. It is aimed at guaranteeing the accuracy and consistency of the information managed by different government agencies and at preventing fraud. Then, civil registration documents had to be secured. New technologies are worth nothing if documents are not secured from the beginning. Finally, the government is seeking a reliable tool that can produce statistics. Thus, in addition to producing certificates, the civil registration system had to be statistically useful.

Thus, the base of the new system's global architecture is the Civil Register Modernization Agency, where the software (called Citoyen, or Citizen) is installed. Every civil register center communicates directly with the software installed in the headquarters. The Civil Register Modernization Agency stores the unique identifier code referential, the Burkina locality referential, the civil register central database, the documentary database and archives, and the web services. The documentary paper records are now being digitalized and inserted into the database. This data entry project is ongoing.

Diplomatic and consular missions connect to the central database through a protected link. This service began in Abidjan, as there is a community of approximately 7 million Burkinabe in the Ivory Coast. The National Identification Office, the National Passport Service, and the National Electoral Commission connect users to the central database through a protected link. The electoral file will eventually be created automatically from the civil registry database. Currently, however, every time elections are held, the government must take a census of the voters, their card data, and other information, which is very costly.

With respect to interoperability, there will be an automatic interface between civil registration and identification. This will guarantee the uniqueness of civil data and thus avoid inconsistencies between documents issued at the passport service and those issued by the National Identification Service.

The Government of Luxembourg and KRW, a German NGO, are assisting with digitalization. After creating the database, the next task is to raise awareness among people to go to the civil registry. As an incentive, the government is facilitating birth registration through mobile phones, with the help of the European Union and UNICEF.

Zakaria Bin Awi, Director General, ICT, National Registration Department, Malaysia, shared some of the practices and initiatives that are implemented in Malaysia. He began by explaining the role of the National Registration Department of Malaysia (NRD), which is to collect, integrate, and register vital personal information and to issue registration documents, including birth and death certificates and ID cards. The NRD also maintains permanent registers and enforces registration acts, ordinances, and regulations. The role of the NRD has expanded from collecting information for its own purposes to sharing information with government agencies throughout the country.

One solution that can overcome challenges of interoperability is having a single civil registry for birth, adoption, ID management, marriages, citizenship, and death registration. The RND database was fully converted in 1998 to a system that encompasses birth registration, issuance of ID cards, and others. ID cards are not issued to anyone who does not present proof of birth registration so that the same record is transferred into the chip of the ID card.

The second solution is to have a single identification number for individuals. In Malaysia this ID is called "My ID," as the number is assigned during birth registration. It is used as a primary reference number by all government agencies and as a secondary reference number for private and financial institutions.

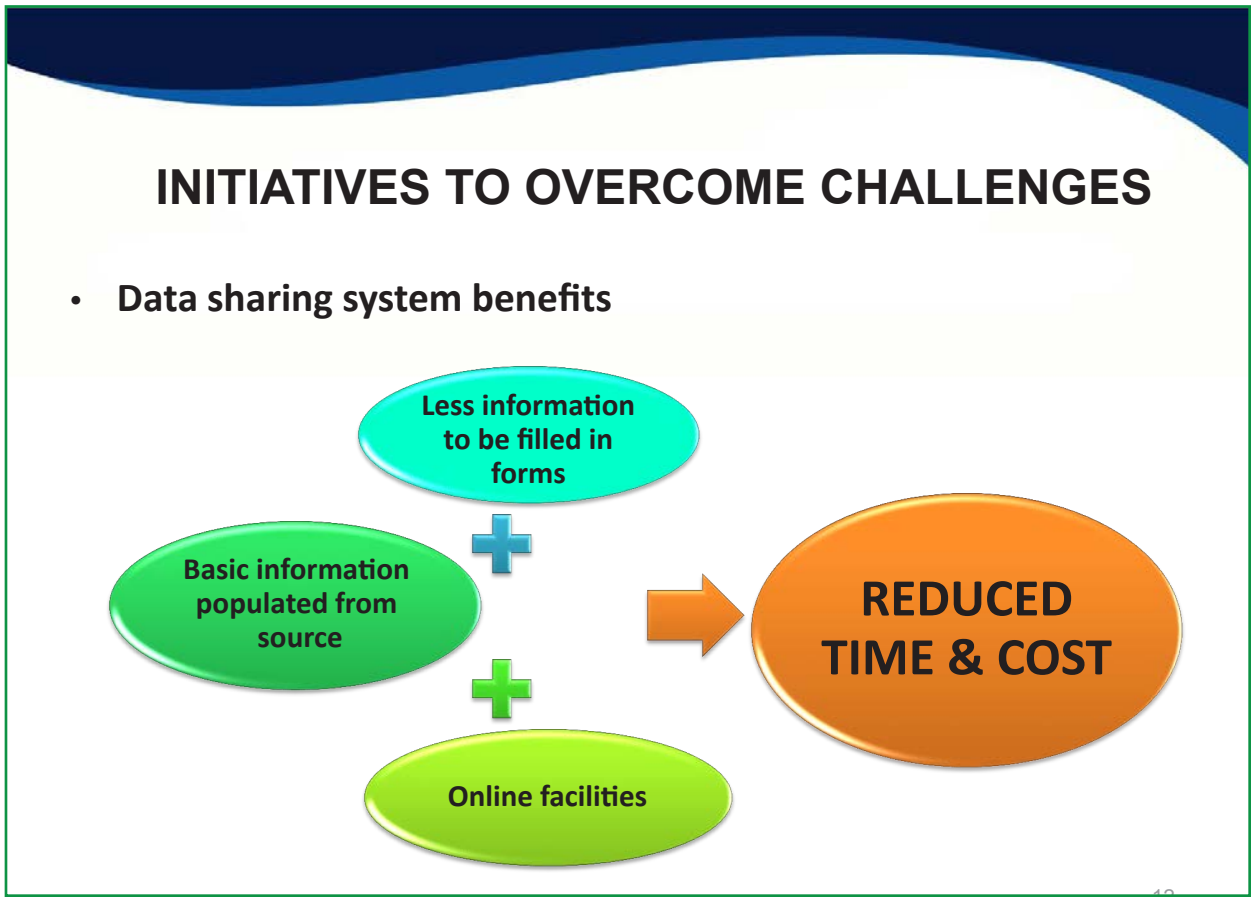
Mr. Zakaria underscored the importance of having biometric data, specifically the fingerprint, for identification and authentication of the identity of individuals. It is captured at the age of 12, along with a photo, when individuals apply for an ID card.

Malaysia has a number of outreach programs to encourage everyone to register. The NRD goes to the interior of the country, towns, and major urban centers to register people, to help them apply for an ID card, and to register births. It has mobile facilities and satellite connectivity, which allows direct access to the central system to ensure that the person is not being registered twice. The verification is done online.

NRD also has a bus equipped as a registration office that travels around the country to assist with birth registration and ID application. It encourages people to apply for the new, multiple-purpose ID cards. It also facilitates registration of senior citizens and disabled people.

The government encourages data sharing among government agencies. The Personal Data Protection Act does not prevent the NRD from sharing information. Sharing information registered through the NRD among government agencies improves service delivery. To facilitate data sharing, the NRD established a data sharing system, consisting of a centralized repository of individuals' personal information which acts as a hard drive of information for government agencies to access individuals' information online.

Prior to implementing the new system, people had to provide information every time they



interacted with an agency. With the central registry, a person only needs to give the enrollment information once. The system collects the person's ID card number, name, and date of birth, permanent address, and mailing address. Mailing address and mobile phone numbers are optional, but the name and ID card number are entered into the system, as well as some biometric data.

The advantage of having a data-sharing system is that people do not have to fill out any more forms when visiting other agencies. With their ID card number, the counter staff can retrieve information directly from the system. For example, when a person goes to the Road Transportation Department (RTD) to obtain a new driver's license, she can give her ID number, and the RTD will retrieve the information online and print a new driver's license immediately because all of the information is already there.

The NRD also shares information on the multi-purpose smart card, first issued in 2001. The smart card contains information inside a chip, such as the name, ID number, address, photograph, date of birth, and biometric data. The NRD encourages both government agencies and private institutions to download this information from the chip. For example, banks, most of which have the MyKad reader, can read the ID

card and authenticate the information. They can get real time authentication to prevent bribery and fraud.

The NRD also stores information in the Federal Agricultural Marketing Authority, such as trader profiles data and license data so that officials have all the data. It has a scheme to help the poor and the needy by using MyKad, where identification is verified at the counters and people can purchase food for their families.

Luis Guillermo Chinchilla, Director of the National Registry, Costa Rica, began by presenting a brief summary on the background of the Civil Registry. The Civil Registry of Costa Rica was created in 1888. Then known as the Civil Status Registry, the institution relied on data provided mostly by the Church. After the current Political Constitution of Costa Rica was adopted in 1948, the Civil Registry fell under the administration of the Supreme Electoral Court, which is to say that Civil Registry has been a part of the electoral institution that promotes democratic culture and administers electoral processes in Costa Rica.

The Constitution also establishes its two primary functions: documenting and keeping a national registry of all births, marriages, deaths, and vital events; and creating a list of voters who are eligible to participate in electoral processes or referendums.

To achieve interoperability, the Civil Registry operates in a centralized manner, and all of the data are stored in one database located in San Jose, the capital of Costa Rica. Registration must be done in a timely manner. It takes about eight days on average to register a birth, a marriage, or a death. Since its creation, the Civil Registry has had one defining characteristic, which is that it provides a unique, unrepeatable, and lifetime identity, an identity that is born, evolves, and dies with the individual. This unique number is used for all identification purposes.

Costa Rica's national under-registration rate is around 1 percent. The registration rate for births as well as deaths is 99 percent. Currently, Costa Rica has about 5 million inhabitants, of which about 3 million are voters who are eligible to participate in electoral processes organized by the State or in a referendum.

Internal interoperability has to do with managing unique identities. It has allowed the Civil Registry to issue documents free of charge to minors, registering citizens between 12 and 18 years of age with their photograph and fingerprint. It has also promoted a culture of documentation throughout people's lives.

Once citizens reach the age of 18, they are issued an ID with which they can vote. These documents are issued free of charge in all stages, even if they are lost, stolen, or damaged. All Costa Ricans can have identification at no cost.

Having a unique identity for each citizen has also allowed the Civil Registry to provide documents, such as passports, driver's licenses, Social Security cards, and digital signatures to other state institutions. These four documents carry the same ID number assigned at birth. In other words, a person's passport has the same number as his ID card, driver's license, and digital signature. This policy enables the Civil Registry to keep a degree of control associated with each person's identity.

In light of the above, the Civil Registry has begun entering into inter-institutional agreements on a national level in preparation for an interoperability plan between different state institutions. Costa Rica has enacted an Administrative Formalities Simplification Law that requires public institutions to become interoperable among themselves. In other words, the government cannot require a citizen who has come to an institution to complete a procedure to go to other institutions and bring back their documents; rather, it is the responsibility of every public institution to become interoperable, that is, to interconnect their systems without passing the cost on to the citizens.

There have been changes in the legal framework designed to protect data. In Costa Rica, certain data have restricted access only at the registry level. These include the photograph, fingerprint, signature, telephone number, home address, and cause of death. All other information collected by the Civil Registry is public and can be shared among institutions. According to the self-determination principle defined by Costa Rica's Data Protection Law, entities that have unrestricted access to the information (including private information) are the police and all those institutions charged with generating statistics on vital events and other institutions that are granted access to these data by law.

The Civil Registry has faced some significant institutional challenges. In the process of overcoming them, it has become better at sharing information with other institutions. It is important to ensure data reliability and security. To this end, the Civil Registry has intensified efforts to ensure that the data collected remain safe, non-transferable, and handled in a reliable manner.

The Civil Registry of Costa Rica is also making efforts to make the civil registries of Latin America interoperable in order to share information in accordance with the specific characteristics of the region.

Financing prospects are favorable today, with state-of-the-art technology making giant leaps forward. In this context, it is important to increase access to financing to accomplish the Civil Registry's goals. These include implementing an identity verifier and offering it to public as well as private entities so that when the identity of someone coming forward to complete a procedure is in doubt, authentication can be done in situ from offices or institutions by obtaining the person's fingerprint and comparing it to the database entry. The opportunity for interoperability is open to all institutions, and that it is a tool that must be developed and used well for the benefit of every citizen.

QUESTIONS AND ANSWERS

A participant wanted to know which organization in Korea is responsible for collecting birth and death registrations, and what the modalities are for establishing identity card. He also asked about the stages of an application. The panelist from Korea responded that citizens are registered at birth, and when citizens change their residence, local governments take care of the registration. Registration data obtained by local governments are compiled in the 230 district governments, and are then collected by the MOGAHA data center.

In response to a question about how to register births in remote rural areas where there is no reliable electricity, a panelist responded that in

communities without electricity, registration is done manually. At the end of the year, secondary centers deliver records to main centers, which transfer the data through a memory stick into the central database. In more developed villages, solar panels are used. Another panelist said that in his country, in remote areas the civil registry uses small power generators to generate electricity and then, using more mobile facilities and satellite parabola connectivity to the central database, it can transfer the data and still perform paperless registration.

A participant asked about the unique identifier established by the Civil Registry in Costa Rica and whether it is the same as the number used on identity documents such as the ID card, passport, driver's license, and other documents. The panelist from Costa Rica confirmed that these documents all have the same number. The unique identification number is created in the following manner: the first digit indicates the province, the second digit has to do with a tradition that started in 1888 when births were registered in books; that is, the first book is the following number and each page is divided in two to generate either number 1 or number 2. These have been incorporated into birth certificates and IDs since 1946. This unique identification model was adopted by other institutions of Costa Rica and became the "access key" to document issuance. Having a unique identification number has proven to be very convenient.

A participant asked whether it is better to issue birth and death certificates using a centralized or a decentralized system. A panelist responded that gathering data in one place is far superior in terms of usage, cost, and utility. Another panelist concurred, adding that having a central registry avoids duplication of records and fraud.

A participant asked the panel to explain the best way to implement national ID initiatives and to scale up functions, whether all at once or in stages. Specifically, he asked which system, in terms of function, should be integrated first. In situations where it is too difficult to introduce nationwide systems, he asked if it is possible to introduce systems in one province or state first and then duplicate the system in other provinces in a step-by-step expansion. A panelist said that it is more practical and less risky to scale up using a step-by-step process, which allows time to rectify any problems during the implementation. With respect to the functions of ID cards, the panelist said that his country's multi-purpose smart card had eight applications. It had agreements with government agencies to include all of those applications inside the chip. However, after several years of implementation it was determined that having so many applications was not useful because some of those agencies did not have the capability to input the information into the card or inside the chip. Now, only those applications deemed important and widely used are included in the functions of the ID card.

Key Lessons and Recommendations

- It is essential to communicate to all stakeholders—citizens and individuals, communities, and society—the importance and impact of having legal certainty over all civil registry and identification processes administered by a State, in a country where their belongings, properties, inheritance, and registration of their children have legal certainty. Just as it is important to inform citizens what administrative procedures they have to complete, it is vital to communicate how legal certainty of their identity can benefit them.
- Some of the challenges of interoperability can be overcome by having a single agency responsible for civil registry for birth, adoption, marriages, death registration, citizenship, and ID management.
- Being able to electronically authenticate identities registered in a single national database among and across government agencies improves service delivery.
- The efficiency and multiple advantages of interoperability are arguments for governments to invest in registration and identification systems. For example, they enable governments to carry out programs in areas such as security, which involves forensic research, preventive investigation, and migration security. One of the goals of interoperability is to build connections between the activities of all state institutions and the citizens.
- An integrated civil registration system, interoperability, and ID authentication play important roles in preventing crime and fraud perpetrated by people attempting to use forged documents.

Annex 1

Members of the Steering Committee

Organization: Inter-American Development Bank
Name: Mia Harbitz
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Mia Harbitz, Lead Specialist, Identity Management and Registries, Inter-American Development Bank. Ms. Harbitz has over 25 years of experience in the design and execution of development projects. Since 2004 she has been coordinating IDB's activities in the area of identity management, including a series of studies assessing the practical implications of under-registration of citizens in Latin America. She has designed and managed several projects aimed at modernizing and strengthening the capacities of civil and identification registries in Latin America, improving the quality of national vital statistics systems, and promoting universal birth registration and civil identification. Ms. Harbitz has a background in engineering, and prior to coming to Latin America in 1991, she worked in development programs in East Africa and the Middle East.

Organization: African Development Bank
Name: Maurice Mubila
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Maurice Mubila, Chief Statistician in the Statistics Department at the African Development Bank (ADB). Mr. Mubila holds a Master of Science Degree in Social Statistics from the University of Southampton, United Kingdom, a Bachelor's Degree in Economics from the University of Zambia, and a Bachelor of Science Degree (Honors) in Statistics from the University of Southampton. He has over 20 years of experience at the African Development Bank, developing methodological frameworks and applying statistical methods in such areas as monitoring of the Millennium Development Goals (MDGs), civil registration and vital statistics, poverty

analysis, analysis of infrastructure statistics (transport, energy, water, and ICT), and price statistics in African countries, among others. Prior to joining the bank, he spent 10 years as a professional and then Head of the Price Information and Statistics Unit of the Zambia Central Statistics Agency.

Organization: Asian Development Bank
Name: Kaushal Joshi
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Kaushal Joshi, Senior Statistician in the Development Indicators and Policy Research Division of the Economics and Research Department at the Asian Development Bank. Mr. Joshi has over 20 years of experience in different areas of official statistics. He joined the ADB in 2007 and has been engaged in statistics capacity building in developing countries of the region. His current work focuses on statistics capacity building in developing member countries of the ADB in the areas of national strategies for development of statistics (NSDS), statistics law, national accounts statistics, MDG statistics, gender statistics, and civil registration and vital statistics. He has led the production of the ADB's annual flagship statistical publication *Key Indicators for Asia and the Pacific* for three years, and he developed a Framework of Inclusive Growth Indicators intended to measure progress on inclusive growth in developing countries. Before joining the ADB, he was a member of the Indian Statistical Service, where he handled a variety of projects in social and economic statistics, including large-scale sample surveys, national accounts statistics, and national statistical strategies.

Organization: Asian Development Bank
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Position: Senior Public Management Specialist (e-Governance)
Email: syoon@adb.org

Seok Yong Yoon, Senior Public Management Specialist (e-Governance) in the Regional and Sustainable Development Department (RSDD) of the Asian Development Bank. Mr. Yoon is a focal person for ICT operation and cooperation matters at RSDD and is responsible for the management of the e-Asia and Knowledge Partnership Fund. He has led an e-Governance and Rural ICT development project and organized internal and regional knowledge events on the use of ICT in various sector development initiatives. As a focal person for ICT operation, he has coordinated partnership programs with global ICT companies. He has played an active role in mainstreaming ICTs into the ADB's sector operations through informal and formal group CoP activities.

Organization: Inter-American Development Bank
Name: Estefanía Calderon Lopez
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Estefanía Calderon Lopez, Consultant to the Inter-American Development Bank and Executive Assistant to the Steering Committee. Ms. Calderon is an experienced international development professional with more than eight years of consulting and research experience. For the last five years, she has worked on projects related to civil registry and legal identity issues. Since 2008, she has been engaged in development projects in Ecuador, and for the last 2 years, she has been supporting the design, execution, and evaluation of technical cooperation operations for identity management, civil registration, and identification in Latin American and Caribbean countries.

Organization: Ministry of Government Administration and Home Affairs, Korea
Name: Woong-joe Ko
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Woong-joe Ko, Director in the Ministry of Government Administration and Home Affairs (MOGAHA), Korea. Mr. Ko has served in the Korean government since 1999, mainly in the area of international cooperation on public administration and personnel management. He was in charge of planning and designing several international events where MOSPA played a key role, including the 2014 UN Public Service Forum and Awards Ceremony, co-organized with the United Nations Department of Economic and Social Affairs (UNDESA); the International Identity Management Conference, co-organized with IDB, AfDB and ADB; and the 2014 ASEAN-ROK Ministerial Roundtable on Public Governance, organized by MOSPA. He studied in the Master's Program in Public Administration at Seoul National University, and holds a Ph.D. in Politics from the University of Exeter, United Kingdom.

Annex 2

Participants List

Organization	Country	First Name	Last Name	Institution	Position
AfDB	Botswana	Peter Letlhogonolo	Siele	Ministry of Local Goverment and Rural Development	Minister
AfDB	Botswana	Corneliah Neo	Lepang	Department of Civil and National Registration, Ministry of Labour and Home Affairs	Director
AfDB	Botswana	Modiro	Moahosi	Department of Civil and National Registration, Ministry of Labour and Home Affairs	Chief Registration Clerk
AfDB	Burkina Faso	Aime Gerard	Yameogo	General Directorate of Modernization of Vital Statistics	General Director
AfDB	Burkina Faso	Allassani	Ouedraogo	National Office of Identification	National Policy Adviser
AfDB	Cameroon	Alexandre Marie	Yomo	Ministry of Territorial Administration and Decentralization	Director
AfDB	Cameroon	Jean Luc	Ebela	General Delegation for National Security	Coordinator
AfDB	Ivory Coast	Hamed	Bakayoko	Ministry of the Interior and Safety	Minister
AfDB	Ivory Coast	Hassan	Cisse	National Office of Identification	Director
AfDB	Ethiopia	Genene Bizuneh	Eshete	United Nations Economic Commission for Africa/AfDB	Consultant

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Organization	Country	First Name	Last Name	Institution	Position
AfDB	Ethiopia	Raj Gautam	Mitra	United Nations Economic Commission for Africa	"Chief, Demographic and Social Statistics Section African Centre for Statistics"
AfDB	Ethiopia	Lemma Netsanet	Abera	Vital Events Registration Agency	General Director
AfDB	Ethiopia	Yidnekachew Sime	Mergia	National ID Project Operation	Deputy Director
AfDB	France	El Iza	Mohamed	PARIS21, Development Co-operation Directorate, Organisation for Economic Co-operation and Development	Deputy Secretariat Manager
AfDB	Ghana	Edwin Nii Lantey	Vanderpuye	Ministry of Local Government and Rural Development	Deputy Minister
AfDB	Ghana	John Yao	Agbeko	Births and Deaths Registry	Registrar
AfDB	Ghana	Josiah Alfred Mills	Cobbah	National Identification Authority	Chief Executive Officer
AfDB	Kenya	Ellington	Williams	UNICEF Eastern and Southern Africa Regional Office	Regional Advisor, Child Protection
AfDB	Kenya	Gloria Waithira	Matenge	ISIbalo Young African Statisticians Association/ United Nations Economic Commission for Africa	Young African Statistician
AfDB	Kenya	Edwine	Ochiang	Plan International	Governance and Advocacy Advisor
AfDB	Kenya	Milen Kidane	Zerezghi	UNICEF Eastern and Southern Africa Regional Office	Child Protection Specialist

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Organization	Country	First Name	Last Name	Institution	Position
AfDB	Madagascar	Mahafaly	Solonandrasana Olivier	Ministry of the Interior and Decentralization	Minister
AfDB	Madagascar	Marie Simone	Ralinirina	Ministry of Justice	Chief
AfDB	Madagascar	Clarence	Rabe	Ministry of the Interior and Decentralization	Director
AfDB	Mozambique	Maria Benvinda	Delfina Levi	Ministry of Justice	Minister
AfDB	Mozambique	Domingos Francisco	Jofane	General Directorate of Modernization of Civil Status	Director
AfDB	Mozambique	Carla Roda de Benjamin Guilaze	Soto	Ministry of Justice	Permanent Secretary
AfDB	Mozambique	Mayke	Huijbrets	UNICEF	Chief, Child Protection
AfDB	Namibia	Lydia Tjihimise	Kandetu	Ministry of Home Affairs and Immigration	Deputy Secretary
AfDB	Namibia	Anette Bayer	Forsingdal	Ministry of Home Affairs and Immigration	Director
AfDB	Namibia	Stefanus	Van Staden	Office of the Prime Minister	Director
AfDB	South Africa	Maletela	Tuoane-Nkhasi	Statistics South Africa	Executive Manager
AfDB	South Africa	Pali J.	Lehohla	Statistics South Africa	Statistician-General
AfDB	Tanzania	Phillip Gerald	Saliboko	Registration Insolvency and Trusteeship Agency	CEO/Registrar General
AfDB	Tanzania	Angela Kemanzi	Anatory	Registration Insolvency and Trusteeship Agency	Registration Manager, Births, Deaths, Marriage, Divorce, and Adoption
AfDB	Tanzania	Hamida	Mduma	Registration Insolvency and Trusteeship Agency	Head, Information Technology Unit

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Organization	Country	First Name	Last Name	Institution	Position
AfDB	Tunisia	Maurice	Mubila	African Development Bank	Chief Statistician
AfDB	Tunisia	Hilaire Albert	Kadisha Mbiya	African Development Bank	Statistical Assistant
AfDB	Tunisia	Charles Leyeka	Lufumpa	African Development Bank	Director
AfDB	Uganda	Eva	Kentaro	Uganda Registration Services Bureau	Director
AfDB	Uganda	Betty	Nasenja	Ministry of Internal Affairs	Deputy Project Manager
AfDB	Zambia	Ngosa	Simbyakula	Ministry of Home Affairs	Minister
AfDB	Zambia	Alick Trywell Walova	Mvula	National Registration, Passport, and Citizenship	Principal Registrar
AfDB	Zambia	Martin	Nyahoda	National Registration	Principal Registrar
AfDB	Uganda	Christopher	Kantinti	Ministry of Internal Affairs	Manager Technology
ADB	Australia	Peter	Harper	Labour and Social Statistics Group Australian Bureau of Statistics	Deputy Australian Statistician, Population
ADB	Bangladesh	Mustafa	Kamal	Ministry of Planning	Planning Minister
ADB	Bangladesh	Anir	Chowdhury	Office of the Prime Minister	National Policy Adviser
ADB	Bangladesh	Mokhlesur	Rahman	Election Commission	Additional Secretary
ADB	Cambodia	MAO	Chandara	General Department of Identification, Ministry of Interior	Director General
ADB	Cambodia	Chhun	Vanna	Department of Management Information Systems, General Department of Identification, Ministry of Interior	Deputy Director

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Organization	Country	First Name	Last Name	Institution	Position
ADB	Cambodia	Yin	Malyna	General Department of Identification, Ministry of Interior.	Deputy Director General
ADB	India	Bart W.	Édes	Asian Development Bank	Director
ADB	India	Thampy	Koshy	Ernst and Young LLP	Partner-Government Advisory
ADB	India	Kaushal	Joshi	Asian Development Bank	Senior Statistician
ADB	Korea	Jae-hong	Lim	United Nations Project Office on Governance	Head
ADB	Korea	Seok Yong	Yoon	Asian Development Bank	Senior Public Management Specialist, e-Governance
ADB	Malaysia	Zakaria	Bin Awi	National Registration Department	Deputy Director General, ICT
ADB	India	Vibhor	Jain	Ernst & Young LLP	Associate Director, Advisory Services
ADB	Mongolia	Baasandorj	Barsuren	Integrated Legal Policy Department, Ministry of Justice	Head
ADB	Mongolia	Pursevdorj	Tsesen	General Authority for State Regstration	Head
ADB	Nepal	Tulasi	Prasad Gautam	Ministry of Home Affairs	Joint Secretary
ADB	Nepal	Surya Prasad	Silwal	Ministry of Home Affairs	Secretary
ADB	Pakistan	Khalid	Khan	Civil Registration and Management System, National Database and Registration Authority	Former Director General
ADB	Pakistan	Barrister Abid Waheen	Sheikh	Pakistan Bait-ul-Mal	Managing Director

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Organization	Country	First Name	Last Name	Institution	Position
ADB	Philippines	Lisa Grace	Bersales	Philippine Statistics Authority	National Statistician
ADB	Philippines	Elpidio	Nograles, Jr.	Philippine Statistics Authority	Division Chief
ADB	Philippines	Cynthia Lizzette	Francisco	Asian Development Bank	Public Management Officer
ADB	Philippines	Anjiellu	Francisco	University of Asia and the Pacific	Volunteer Organizer
ADB	Switzerland	Carla	Abouzahr	CAZ Consulting, Geneva, Switzerland	CEO
ADB	Tajikistan	Midsaizod	Hakim	Ministry of Justice of the Republic of Tajikistan	Deputy Minister
ADB	Tajikistan	Nizomidin	Zohidov	Ministry of Foreign Affairs of the Republic of Tajikistan	Deputy Minister
ADB	Thailand	Vichian	Chidchanognarth	Bureau of Registration Administration	Director of Technology
ADB	Thailand	Chukiat	Muttakarn	Ministry of Interior	Deputy Director General, Provincial Administration Department
ADB	Thailand	Jonathan	Marskell	United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)	Consultant, Statistics Division
ADB	United States	Alvin T.	Onaka	Hawaii State Department of Health	State Registrar of Vital Statistics and Chief, Office of Health Status Monitoring
IDB	Argentina	Juan Jose	Rusailh	National Registry of Persons	National Director, Citizen Services and Institutional Relations

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Organization	Country	First Name	Last Name	Institution	Position
IDB	Bangladesh	Syed Khaled	Huibregts	World Bank	Public Sector Specialist
IDB	Barbados	Maureen	Crane-Scott	Registration Department	Judge of the High Court
IDB	Barbados	Laurie-Ann	Bovell	Supreme Court of Barbados	Registrar
IDB	Brazil	Helvio	Peixoto	Ministry of Justice	Coordinator for RIC
IDB	Canada	Boubacar	Djibo	International Civil Aviation Organization	Director, Air Transport Bureau
IDB	Chile	Rolando	Martinez	Civil Regitry and Identification	Deputy Director of Research and Development, Civil Registry and Identification Services
IDB	Colombia	Roberto	Carrera	National Registry of Civil Status	Register Advisor
IDB	Costa Rica	Luis Guillermo	Chinchilla Mora	Civil Registry	General Director
IDB	Costa Rica	Vilma Isabel	Loria	n/a	n/a
IDB	Ecuador	Oscar Manuel	Muyano	National Directorate of Civil Registry, Registration, and Identification	Coordinator, Research and Software Development
IDB	Ecuador	Claudio	Prieto	Direccion Nacional de Registro civil, Cedulacion e identificacion	Deputy Director
IDB	Ecuador	David	Vizueta	National Registry of Persons	Regional Coordinator
IDB	El Salvador	Margarita	Velado	National Registry of Persons	President
IDB	Guatemala	Rudy	Gallardo	National Registry of Persons	Executive Director
IDB	Guatemala	Dorval Ricardo	Ponce Garcia	National Registry of Persons	Chief of International Cooperation

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Organization	Country	First Name	Last Name	Institution	Position
IDB	Guatemala	Dante Antonio	Avalos Aguilar	National Registry of Persons	Management and Monitoring Director
IDB	Guyana	Azeena	Baksh-Singh	Deeds Registry, Supreme Court	Registrar
IDB	Haiti	Jean-Baptiste F.	Saint-Cyr	National Office of Identification	General Director
IDB	Honduras	Gerardo Enrique	Martínez Lozano	National Registry of Persons	Technical Deputy Director
IDB	Jamaica	Colette	Roberts	Office of the Prime Minister	Chief Technical Director
IDB	Jamaica	Deirdre English	Gosse	Registrar General's Department	Chief Executive Officer
IDB	Mexico	Jose Antonio Rueda	Cuautle	General Directorate of National Registry of Population and Personal Identification	General Director of the Coordination of Political Organization and Strategic Alliances
IDB	Nicaragua	Felix	Juárez	Central Registry of Civil Status of Persons	Director
IDB	Panama	Ivan	Guerra	Electoral Tribunal	National Director of Civil Registry
IDB	Panama	Luis Bermudez	Ayala	National Directorate of Identification	National Director of ID Cards
IDB	Paraguay	Yeni	Speranza	National Directorate of Civil Status	Administrative Director
IDB	Peru	Jorge Luis	Yrivarren	National Registry of Identification and Civil Status	National Chief
IDB	Peru	Felix	Ortega	National Registry of Identification and Civil Status	National Chief Advisor
IDB	United States	Ana-Maria	Rodriguez Ortiz	Inter-American Development Bank	Manager

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Organization	Country	First Name	Last Name	Institution	Position
IDB	United States	Haydee	Reyes	Inter-American Development Bank	Consultant
IDB	United States	Estefania	Calderon	Inter-American Development Bank	Consultant
IDB	United States	Hassane	Cisse	World Bank	Director, Governance and Inclusive Institutions
IDB	United States	Keiko	Osaki-Tomita	United Nations	Chief, Demographic and Social Statistics Branch, Statistics Division
IDB	United States	Mia	Harbitz	Inter-American Development Bank	Senior Specialist
IDB	United States	Roberto	Manrique	Inter-American Development Bank	Senior Advisor, Operations
IDB	United States	Samuel	Mills	World Bank	Senior Health Specialist
IDB	United States	Diana	Moss	IDB/Spark Media	Consultant
IDB	United States	Caralyn	Moore	IDB/Spark Media	Consultant
IDB	Uruguay	Adriana Boggio	Alvarez	General Directorate of Registry of Civil Status	Inspector
IDB	Uruguay	Juan Esteban Martinez	Iglesias	National Directorate of Civil Identification	Director, Department of Identity Cards and Passports
IDB	United States	Kendra	Gregson	UNICEF	Coordinator, Universal Civil Identity Program
IDB	United States	Steven	Griner	Organization of American States	Senior Adviser
MOGAHA	Korea	Sang Kyum	Kim	Dongguk University	Professor

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Organization	Country	First Name	Last Name	Institution	Position
MOGAHA	Korea	Jong Han	Kim	Ministry of Government Administration and Home Affairs	Director
MOGAHA	Korea	Jae Kwang	Kim	Sunmoon University	Professor
MOGAHA	Korea	Jun Hyeon	Jeong	Dankook University	Professor
MOGAHA	Korea	Dong Yub	Baek	National Information Society Agency	Chief Researcher
MOGAHA	Korea	Seong Woo	Ji	Sungkyunkwan University Law School	Professor
MOGAHA	Korea	Kuk Hwan	Jeong	Korea Information Society Development Institute	Senior Research Fellow
MOGAHA	Korea	Cheol ho	Oh	Soongsil University	Professor
MOGAHA	Korea	Young Hwa	Kim	National Information Society Agency	Researcher
MOGAHA	Korea	Kwang Sok	Oh	National Information Society Agency	Senior Research Fellow
MOGAHA	Korea	Jeong Rye	Choi	Disaster Cooperation Division	Director
MOGAHA	Korea	Yean Ok	Yoon	Vital Statics Division	Director
MOGAHA	Korea	Young-kun	Joung	Ministry of Government Administration and Home Affairs	Chief

Achieving inclusive and sustainable progress in our countries hinges critically on having strong public and private institutions supported by effective public policy and appropriate legal framework. In this context, civil and identification registries play a pivotal role in providing the foundations for effective policy decisions in areas such as education, health, tax administration, employment, and land use regulation. The civil registry is also the conventional data source for the production of timely vital statistics that inform public sector decision making.

Charles Lufumpa
Director
Statistics Department, African Development Bank

Design of projects, identification of most eligible project location, selection of target populations, and the provision of benchmarks in a project's results framework is often hampered due to lack of local level data on populations. At the same time, the lack of civil registration and identity documents poses severe challenges in the implementation of targeted interventions (such as direct cash transfers and other targeted subsidies for the poor and vulnerable) making identification of beneficiaries subject to errors of omission and duplication.

Bart Edes
Director
Poverty Reduction, Social Development and Governance Division
Asian Development Bank

Identity management is all about inclusion. It is about opportunities for all boys and girls in our countries; all of them should be counted. We cannot stop until no child lingers in what I call "civil limbo." We need legal frameworks and policies that respond to citizens' demands. We also need to create more awareness of the benefits of registration and find more creative ways to utilize the available technology and financial resources to improve the process. To put it simply, we need a system that is accessible, friendly, and familiar.

Ana Maria Rodriguez
Manager
Institutions for Development
Inter-American Development Bank

IDB