THE CASE FOR INVESTMENT IN
CIVIL REGISTRATION AND VITAL STATISTICS SYSTEMS

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KEY MESSAGES

Civil Registration and Vital Statistics (CRVS) is an essential public good that serves as the foundation for a well-governed modern economy, wherein human rights are protected and public services are delivered efficiently and effectively. As noted by Dr. Lee Jong-Wook, the then WHO Director-General in July 2003, *'To make people count, we first need to be able to count people'*.[1] The current WHO Director-General, Dr. Margaret Chan, has also emphasised that *'it is vital to support the development of complete and accurate civil registration systems that include births, deaths and causes of death'*.[2]

There are four key reasons why countries should invest in CRVS systems:

1) Civil registration provides individuals with documentary evidence of their legal identity, which helps protect their human and civil rights and enables them to access essential services.

2) Reliable vital statistics support efficient planning, implementation and evaluation of public services and development programmes across sectors.

3) CRVS is the only source of universal and continuous demographic and health data in a country, with other population data collection approaches (e.g. census, household survey) being less effective.

4) Key global and national developments (such as the run-up to the Millennium Development Goals (MDGs), and an increased emphasis on fiscal decentralisation and e-governance) have heightened the need for reliable population data.

Investment in CRVS systems is therefore an imperative, and results in tangible benefits at the international, national, and sub-national levels.

It is difficult to put a price tag on CRVS systems. The costs vary significantly by country context and are incurred across a range of sectors and government departments at the national and sub-national levels. There is however a growing body of evidence that suggests that CRVS systems are affordable for countries. This is based on the premise that CRVS yields wide ranging benefits at a relatively low cost per beneficiary, especially when compared to other population data collection approaches; and that any investment in these systems will, in substantive measure, be offset by cost savings through improved planning, targeting and monitoring of public services, as well as through reduced dependence on alternative data collection approaches.[3] [4]

Moreover, historical and contemporary evidence suggests that high quality, improved coverage and the effective use of vital statistics go hand-in-hand with economic and social development.[5] While developing comprehensive CRVS systems requires long-term commitment and stewardship by governments, it is possible to streamline existing systems (e.g. computerisation; rationalising legal procedures), which can result in substantial improvements in the performance of CRVS systems in a relatively short period of time.

Despite its evident benefits, over 100 developing countries do not yet have well-functioning CRVS systems.[6] Unless this issue receives immediate and concerted attention by global, regional and national stakeholders and donors, the continued cost of neglect of CRVS systems will detract from both human and economic development.

The call for investment in, and action on, CRVS systems is now stronger than ever, with demands for greater recognition of human identities and rights; improved visibility and accountability of governance at all levels; and the need for more efficient and impact oriented spending in resource constrained settings.[7] The approaching MDG targets and the imperative to sustain these outcomes beyond 2015 have also underscored the importance of well-functioning CRVS systems.[8]

INTRODUCTION

Approximately 40 million people are born and another 40 million people die across the developing world (one third and two thirds of the world's annual total respectively) without a trace of official or legal record – a 'scandal of invisibility'[9] that renders them unable to attain basic human rights and access essential public services.[10] Further, inadequate CRVS systems in countries limits the authority of evidence to plan the spending of, and measure the impact of, trillions of dollars of national and donor budgets on poverty and welfare, thereby impeding economic and social development.

In order to help address the issue, this document presents the case for investment in CRVS systems. It is primarily targeted at global, regional and national policy makers and opinion leaders across developing countries, and has been developed by the Health Metrics Network (HMN) of the World Health Organisation (WHO).[11] The investment case highlights the value proposition and benefits of CRVS systems across stakeholder categories, the vital ingredients and types of costs in developing these systems, and key actions going forward.

WHAT IS CRVS?

CRVS comprise the process of:[12]

- collecting information on the occurrence and characteristics of vital population events (primarily birth, death, marriage and divorce, but also adoption, legitimation, recognition of parenthood, annulment of marriage, and legal separation); and

- generating vital statistics through the compilation, analysis, evaluation, presentation and dissemination of data.

The figure below elucidates the processes and stakeholders involved in CRVS systems.

Figure 1: Structure of CRVS systems and key stakeholders [13] [14]
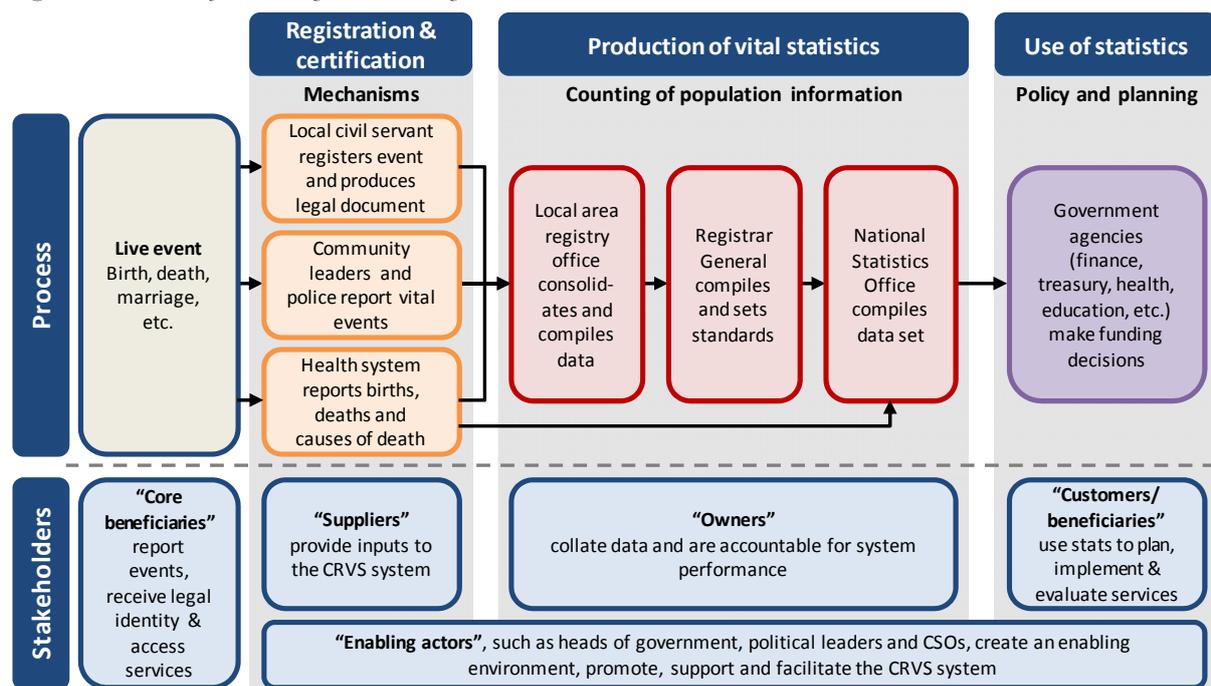
WHY INVEST IN CRVS?

There are four key reasons as to why it is critical for countries to invest in CRVS: [15]

(i) Civil registration provides individuals with documentary evidence of their legal identity, which helps protect their human and civil rights and enables them to access essential services.

By registering, individuals create an official trace of their existence, which means they become 'visible' and are accounted for. This identity allows individuals to:

- exercise their legal, social and political rights, such as judicial, voting and pension rights, seek formal employment, establish family relationships, legally transfer property and claim inheritance, amongst others;

- establish and protect their human rights through reduced risk of marginalisation and exploitation;

- secure access to public services, such as health care, education, welfare payments and social housing, as well as utilities such as water, gas and electricity; and

- avail of other important services such as opening bank accounts, obtaining passports and driving licenses, etc.

Given that many of the unregistered are among the poorest and most marginalised in society, lack of an identity and the accompanying rights and privileges exacerbate already significant economic and social inequalities in many countries. For instance, unregistered young girls are often denied basic rights, including access to education, employment, and other services in many countries, which can aggravate existing gender inequalities and discrimination.

(ii) Reliable vital statistics support efficient planning, implementation and evaluation of public services and development programmes across sectors.

Key population data informs the development, implementation and monitoring of government policies and programmes. CRVS provides the much needed information (refer Figure 2) to help governments plan what services are required where and when, deliver them equitably, and monitor whether public services are meeting their intended objectives. In addition, vital statistics enable government departments across sectors to more thoroughly evaluate the impact of their policies and programmes.

For example, Ministries of Finance can access information on aging and population growth across the country, to help inform policy decisions on taxation and public spending. Planning departments can use the population information to determine infrastructure requirements at national and local levels. Ministries of Health can access statistics on levels and trends in fertility, mortality and causes of death, which enables them to identify the emerging health threats, disease burden, and high risk groups. Indeed, as noted by the Namibian Ministry of Information and Communication, "*health care can be vastly improved by strengthening the information systems that can support care*".[16] Many other government departments – such as those in charge of employment, justice,

education, social security and other social sectors – can better plan for, deliver and monitor the services provided through improved CRVS systems.

Figure 2: Types of statistics generated by CRVS systems and multi-sectoral benefits [17]
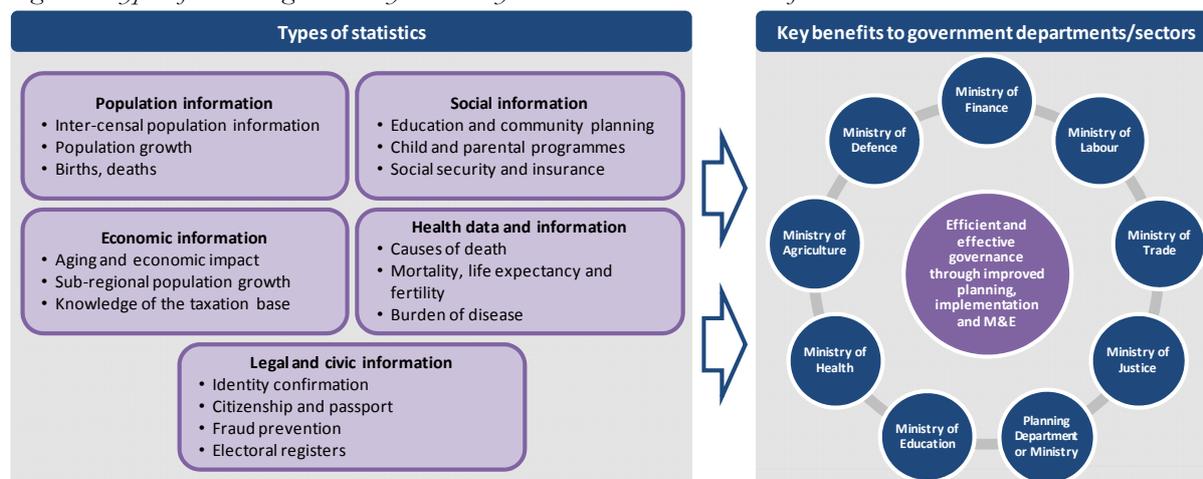
Box 1 provides some practical examples of the use of vital statistics in effective governance.

Box 1: Country examples of the use of vital statistics for effective governance

- Thailand has a long history of CRVS systems guiding the targeting of government services. An electronic registration system generates a unique identification number for citizens, which forms the basis for all identification documents and enrolment in state health insurance schemes. Reimbursement and patient data from this state insurance scheme are in turn used to enhance the quality of the CRVS database.[18]

- The South African government denied the prevalence and effects of the HIV/AIDS epidemic in the early 2000s, in part due to the absence of cause of death data (despite high levels of birth and death registration). Better capture and use of existing data for vital events subsequently forced a change in policy and programme priorities. Despite ongoing problems with the quality of cause of death data, this is now routinely collected and analysed to show disparities in mortality between districts and regions.[19]

- Australia has a well-functioning CRVS system which yields "significant social, health and financial benefits".[20] In addition to forming the basis for legal identity and citizenship, CRVS data is widely used to develop and plan social and economic policies and programmes; underpin financial transfers, including the equitable distribution of tax revenues from central government to states/ territories; manage identity fraud; and develop health planning at the national and state/ territory levels.

Vital statistics also provide the necessary evidence to help development agencies, donors and other stakeholders, such as civil society, to more accurately plan, implement and evaluate their interventions. This information is also critical for businesses and the private sector to better identify and serve their customers, as well as in planning their business ventures. For example, banks and other financial institutions benefit from the certainty of dealing with individuals with a proof of identity, while insurance companies can increase the accuracy of actuarial calculations, and provide more efficient services through the use of reliable population information.

(iii) CRVS is the only source of comprehensive and continuous population related data

CRVS, unlike any other data source, are exclusively country owned and executed systems which continuously collect universal vital statistics on population dynamics and health indicators at the national and sub-national levels. A number of alternate data collection approaches are often

employed to complement incomplete CRVS systems – however, these are generally donor funded, project-based, and only provide temporary solutions to long term data collection needs.

While useful in their own right as interim measures, these approaches do not capture complete information on key population statistics, particularly adult mortality (including cause of death data), and cannot sustainably function as long-term alternatives to civil registration. Also, by design, these measures typically rely on retrospective reports of events and are prone to selection and recall biases. Moreover, these approaches do not confer the additional benefits of legal identity to individuals and communities that are associated with comprehensive civil registration.

Table 1 presents an assessment of commonly used alternate data collection approaches relative to CRVS systems, along with some estimated costs – providing an indication of the extent of cost savings with improved CRVS systems. The cost ranges presented are based on a review of select literature and are not comprehensive. In addition, the costs for each approach are likely to vary significantly according to the study design, coverage and the characteristics of the country where they are implemented. While the cost ranges provide a useful yardstick for comparison across approaches, the estimates are often budgets (rather than actual outlay), and should generally be interpreted with caution.

Table 1: Comparison of CRVS systems to alternate population data collection approaches [21] [22]

Approach	Relative assessment to CRVS	Total annual cost	Annualised cost per participant	Description
Population census	Occurs periodically (usually every 10 years) and can produce estimates of births, child and adult mortality, and causes of death. However, these estimates are not continuous, and are inappropriate for tracking development indicators in the short-term, for example, annual child mortality. It is also difficult in a census to collect reliable or specific cause of death information.	US$ 1m-8m	US$0.23-2	Based on studies in Tanzania, South Africa, Burkina Faso, Cambodia, Malawi, Moldova and New Zealand. [23]
Sample Registration Systems (SRS)	Provides continuous estimates of births, child and adult mortality and cause of death (by verbal autopsy) in a sample area. However, SRS relies on active case finding of vital events and is relatively expensive. Very large sample sizes are needed to generate reliable local data, and there might be selection bias over the long term.	US$ 0.1m-0.8m	US$0.23-1	Based on studies in Tanzania, Cambodia, Malawi and Indonesia. (Note that SRS cost estimates are indicative due to incomplete information).
Demo-graphic Surveillance Sites (DSS)	Tracks longitudinal demographic population changes through regular household visits in a defined and generally small geographic area. Can retrospectively determine cause of death through verbal autopsy. However, its limited coverage makes it difficult to generalise data reliably and apply findings to the wider population.	US$ 0.05m-0.3m	US$0.8-3.08	Based on studies in Tanzania, Ethiopia and Malawi. [24] (DSS programmes are difficult to compare due to wide variation in study design).
Household sample survey	Survey samples are used to retrospectively estimate fertility and under-5 mortality levels and trends, using both direct estimation and indirect demographic methods. [25] Sample sizes are generally quite small, resulting in wide confidence intervals for key indicators, thus limiting the possibility to monitor trends and identify inequalities between population groups.	US$ 0.8m-1.2m	US$7.57-36.31	Based on studies in Tanzania, Peru, Burkina Faso, Malawi, Moldova and Cambodia. (Cost estimates vary considerably based on the study design).

Box 2 provides some cost estimates of alternate approaches to data collection in Tanzania, which are broadly in line with the cost ranges set out in the above table.

Box 2: Cost of information systems for health and poverty indicators in Tanzania[26]

A study compared the costs and outputs of different data collection approaches in Tanzania that generate statistics on poverty, health and survival. This included a population census, sample registration system, demographic surveillance systems, household sample surveys, and a HMIS. While the findings should be interpreted with caution, as different approaches were used to produce different statistics and the data obtained from different systems varied widely, the HMIS had the lowest annualised cost per participant at US $0.13 (total annual cost of US $2.1m), followed by the sample registration system at US $0.23 (total annual cost of US $719,427), closely followed by the population census at US $0.25 (total annual cost of US $8.2m).[27]

(iv) Strong impetus for CRVS in the current global and national context

Recent developments at the global and country levels have heightened demands for complete, accurate and detailed population information, which are best provided by CRVS systems. The 2015 MDG deadline has put a spotlight on better capturing vital population events and monitoring the effectiveness and impact of health and development interventions. CRVS systems provide inputs on 42 out of the 60 MDG progress indicators, demonstrating the critical value of CRVS data to countries and global partners in monitoring development outcomes.[28] Furthermore, given that donors often base their calculations for development assistance on population information, reliable vital statistics are likely to support country applications for donor support.

At the country level, the push towards fiscal decentralisation and devolution in order to improve the design and delivery of locally provided services has increased the focus on CRVS systems. In addition, the opportunities provided by the rapidly-improving electronic and mobile technologies – for example, in terms of e-governance – have, on one hand, made individuals more aware and demanding of their rights, and on the other, enabled governments to establish CRVS systems more cost-effectively than earlier.

Summary of benefits

Investing in CRVS systems yields significant long-term developmental benefits for individuals, government departments across sectors, donors, civil society, and the private sector. Developing robust CRVS systems will lead to a reduced reliance on other population data collection approaches, which typically only provide temporary solutions to a country's long term population data needs and do not confer benefits of legal identity to individuals. The demand for reliable population based statistics in now greater than ever, in light of the approaching MDG targets and plans for post-2015, as well as national developments such as fiscal decentralisation and growth in e-governance. There is hence a clear case for immediate investment in CRVS systems across countries.

WHAT TO INVEST IN AND WHAT ARE THE COSTS?

Building the various blocks of a fully-functional CRVS system (Figure 3) requires a holistic and multi-disciplinary approach to implementation by countries. Strong political and financial backing for these systems need to be combined with a conducive legal and regulatory framework that supports compulsory civil registration in the country and protects information confidentiality. Once these are in place, the main operational challenges are in developing the technical capacity of the CRVS functionaries and institutions at all levels, and ensuring adequate supporting infrastructure and technological investments to enable efficient recording, archival and retrieval of population data. The full coverage and quality of the system relies on high levels of public awareness, trust and participation to register vital events in a timely manner.

Figure 3: Building blocks of CRVS systems [29]
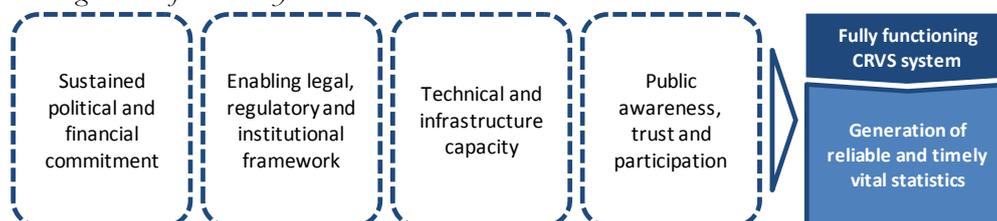
The quantum and types of investment in CRVS systems in a country are subject to the extent to which the building blocks are in place. These relate to the three stages of development of CRVS systems:[30] [31] [32]

- *Limited civil registration* – where there is an inadequate legal and regulatory framework; low levels of technical and institutional capacity for registration and monitoring of births and deaths; and limited reporting and registration by the population. At this stage, it is likely that all of the building blocks will require development. Alternate data collection approaches such as censuses and surveys may be employed, while in parallel, commencing work on the development of CRVS systems.

- *Incomplete CRVS systems* – while the nature of incompleteness may vary by country, the general characterisation is one where the basic legal, regulatory and institutional framework is in place, but more needs to be done in terms of extending coverage, using registration information to generate vital statistics, improving efficiency by, for example,