

# Health Information Systems Knowledge Hub 18-month work plan 2012-2013



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## Acronyms List

ABS	Australian Bureau of Statistics	mHealth	Mobile Health
AIHW	Australian Institute of Health and Welfare	NCD	Non-communicable disease
AusAID	Australian Agency for International Development	NTD	Neglected tropical disease
BAG	Brisbane Accord Group	NZ	New Zealand
CEO	Chief Executive Officer	PHIN	Pacific Health Information Network
CoD	Cause of Death	PSHON	Pacific Senior Health Officials Network
DFiD	Department for International Development	PMA	Pasifika Medical Association
DoHA	Department of Health and Ageing	PVSS	Pacific Vital Statistics Strategy
ESCAP	Economic and Social Commission for Asia and the Pacific	QUT	Queensland University of Technology
FNU	Fiji National University	SEARO	South East Asia Regional Office
HIMAA	Health Information Managers Association of Australia	SEAMEOTROPED	South East Asian Ministers of Education Tropical Medicine and Public Health Network
HIS	Health Information Systems	SPC	Secretariat of the Pacific Community
HMN	Health Metrics Network	SPH	School of Population Health
HR	Human Resources	STPHI	Swiss Tropical Public Health Institute
HRH Hub	Human Resources for Health Hub	TAG	Technical Advisory Group
ICT	Information and Communications Technology	UN	United Nations
IFHIMA	International Federation of Health Information Managers Association	UNFPA	United Nations Population Fund
INDEPTH	International Network for the Demographic Evaluation of Populations and Their Health in Developing Countries	UNICEF	United Nations Children's Fund
L&G	Leadership and governance	UQ	University of Queensland
MCH	Maternal and Child Health	USAID	United States Agency for international development
MDG	Millennium Development Goal	VR	Vital Registration
M&E	Monitoring and Evaluation	WCH	Women and Children
		WHO	World Health Organization
		WPRO	World Health Organization Western Pacific Regional Office

# 1 Summary

The Health Information Systems (HIS) Knowledge Hub continues to expand the evidence-base; consolidate previous work; and promote knowledge translation into policy for the improved use of information for planning, policy and evaluation. The Hub also plays a key role in the dissemination of best methods for improving HIS to strengthen health systems in developing countries in the Asia Pacific region. Hub activities have been informed by, and developed collaboratively, with country partners through a range of engagements, evaluation activities, the midterm review and consultations with AusAID and other development partners in the region and regional networks.

The following work plan for 2012-2013 builds on overarching activities initiated between 2009 and 2011. The work plan consolidates previous research priority investments, with a highly focused emphasis on dissemination of Hub products for a broad range of stakeholders and audiences. The importance of translating new knowledge into policy appropriate formats for use and dissemination is a key priority for the work plan. The approach developed for the next 18 months builds upon the strong foundation of practice change through tools and support to influence policy. Finding mechanisms to increase the sustainability of initiatives has informed many approaches to the work detailed. The Technical Advisory Group (TAG) was invited to review the plan and its rationale in December 2011.

The areas of work for 2012-2013 are spread across four interconnected themes with a strong focus on influencing policy and practice, as requested by countries in the region:

Theme	Strategic Aims
Theme 1: Essential HIS investments for health system strengthening	<ul style="list-style-type: none"><li>• To provide action-oriented recommendations to senior decision-makers on priority investments in HIS</li></ul>
Theme 2: Strengthening and expanding the HIS workforce	<ul style="list-style-type: none"><li>• To consolidate the capacity of regional institutions to develop the HIS workforce</li><li>• To support PHIN as a regional HIS capacity, community of practice and resource</li></ul>
Theme 3: Strengthening vital statistics and cause-of-death data	<ul style="list-style-type: none"><li>• To affect policy through improving the practice of HIS, focussing on the improvement of civil registration as a key driver in practice (and policy) change</li></ul>
Theme 4: Health information systems strengthening for MDGs	<ul style="list-style-type: none"><li>• To provide action-oriented recommendations to senior decision-makers on HIS investments for monitoring disease burdens and risk factors for MDGs</li></ul>

## 2 Introduction

This work plan outlines the program of work for the HIS Hub for the period January 2012 to June 2013. This period, known as the extension period, will focus on targeted dissemination and communication to policy makers and practitioners, AusAID, partner governments and development partners with expected outcomes on policy development and review and practice. This will involve, as detailed in the contract for the extension, but is not restricted to:

- “Targeted engagement and communication by Knowledge Hubs with key stakeholders and potential users of knowledge products, if possible from early in the process, but particularly at the dissemination stage
- Development and distribution of relevant and useful knowledge resources to stakeholders in forms appropriate to their needs, and
- Revisions to the monitoring and evaluation process of each Hub appropriate to their products and stakeholders, and across Hubs to allow evaluation of the Initiative as a whole, and linked to the Australian government’s aid effectiveness principles”.

Implementation of the Communication Strategy that was developed in response to the *Independent Progress Report* (November 2010) continues to be an important means to help the Hub achieve its communication and dissemination goals around policy influence, practice change and capacity development.

## 3 Background and context

### 3.1 Background

The HIS Hub was established in 2008, and the work plan for that year focused on infrastructure and staffing recruitment. Based on this foundation, the 2009 work plan progressed into both **consolidating** and **synthesising knowledge** on the state of HIS in the Asia Pacific region and **creating knowledge** on improving the utility, utilization, cost effectiveness and sustainability of HIS. The work plan for 2010 continued to build on the momentum gained during 2009, with a more comprehensive focus on working in-country with partners to advance health information **capacity**. The work program subsequently had a stronger focus on capacity **development and training**, including a strategic focus on supporting the **Pacific Health Information Network** (PHIN) as a regional capacity of education, training and development.

In 2011 the work plan focused on ensuring the important principles of **aid effectiveness** and the Compact Agreement for Pacific Countries – namely country leadership, mutual accountability and responsibility, and harmonisation of activities. Activities undertaken in 2011 ensured that products were purposefully extended and built-upon to ensure that key **knowledge gaps**, capacity and **dissemination** were effectively addressed. Important **collaborations** with leading academic institutions, and activities convened by the HIS Hub with global networks and agencies such as the Health Metrics Network, WHO, UN Family and INDEPTH, were also enhanced to ensure that the Hub’s products were academically rigorous, innovative and relevant for immediate implementation by development partners. These collaborations attest to the significant **convening power** of the Hub as demonstrated through its many partnerships both outside of the Asia Pacific region, as well as within it.

## 3.2 Context

There is an increasing demand from donors, governments and communities for health systems to accurately account for resources (transparency and accountability) and to demonstrate improvements in the health of populations (results-based and performance-based). Senior health decision-makers require timely, accurate and up-to-date information if they are to make evidence-based policy and investment decisions to address issues that impact on health systems. An effective HIS is the foundation of a well-functioning health system and is a key component in improving health outcomes. Yet, health information systems in Asia and the Pacific are often described as ‘data-rich but information-poor’.

Throughout the last four years, the HIS Hub has actively engaged with countries, regional networks and development partners to synthesise greater knowledge about what is happening within the region. Such engagement has also provided opportunities to develop communities of practice and disseminate existing approaches to HIS development and strengthening, and develop or modify tools, practice guidelines and resources to support countries and health staff and managers make better decisions about HIS management and investments. A key goal of this has been to assist countries to better utilize data generated from HIS to improve the quality, effectiveness and efficiency of health systems, and to address major health problems within countries, such those linked to the Millennium Development Goals (MDGs) and the emerging issues of non-communicable diseases (NCDs).

## 4 Strategic aims

The HIS Hub has five strategic aims for 2012-2013, spread across four interconnected themes:

1. To provide action-oriented recommendations to senior decision-makers on priority investments in HIS
2. To consolidate the capacity of regional institutions to develop the HIS workforce
3. To support PHIN as a regional HIS capacity, community of practice and resource
4. To affect policy through improving the practice of HIS, focussing on the improvement of civil registration as a key driver in practice (and policy) change
5. To provide action-oriented recommendations to senior decision-makers on HIS investments for monitoring disease burdens and risk factors for MDGs.

The Hub also continues to focus upon the following overall aims that have developed during the last three years, namely to:

1. Synthesize existing knowledge and create, when required, new knowledge on health information and health information systems to influence policy decisions on effective investments to strengthen health systems
2. Support the improved availability of timely and quality health information for evidence-based policy and practice decision-making in health
3. Increase the availability of tools, practice guidance and guidelines that support the improved collection, analysis, management and utilisation of health information required to manage, monitor and evaluate the performance of health systems

4. Build sustainable capacity through individuals, networks, organizations, and research and training institutions in the region to continue to advocate for and support strengthened HIS as a key building block of a health system.

## **5 Approach to work plan development**

### **5.1 Strategic approach**

As well as addressing the strategic aims of the HIS Hub, to be included in this work plan each piece of work had to meet the following aims as set out by AusAID in the extension period contract:

1. Complete products commenced in previous work plan cycles
2. Synthesise already-completed products to better suit audience needs
3. Increase engagement with policy makers and potential users of evidence
4. Collaborate across Hubs to synthesise Hub-specific findings into products that articulate key achievements, lessons learnt and emerging challenges that policy makers' face in attempting to strengthen health systems.

Given the strong focus of the extension period on communication and dissemination for policy and practice influence, any products identified in this work plan are required to have a clear strategy for their dissemination and use. The work plan has been tested with Technical Advisory Group members as well as at the Cross Hubs forum to ensure it is meeting the aim and the objectives of the Hub.

### **5.2 Collaborations**

Development of the work plan is through collaboration with key stakeholders over a period of several months. The 2012-2013 HIS Hub work plan continues to respond to the need for:

- Guidance on HIS investments
- Better utilization of existing data and systems for evidence-based policy and practice
- Developing the HIS workforce to improve the quality and timeliness of health information for decision-making and response at all levels of the health system – from the community-provider interface, through to district, provincial and national operational, management, service and policy levels
- Knowledge resources such as tools, mentoring, coaching, targeted advice and short courses to support HIS professionals in applying these tools and concepts confidently for changes in policy and practice
- Support for the development of human capacity to collect, critically analyse, manage and utilize this information
- Strengthening efforts to promote clear and decisive leadership, and embed a culture of delivering results and learning from experience, and adopt HIS and essential health and management data that support decision-making in countries and development agencies
- Working in partnerships to reduce fragmentation and burden on partner countries, leverage off other agencies' investments and mandates, and increase the effectiveness of partners' and Hub activities for dissemination, knowledge translation and action.

There have been several forums where these needs have been expressed – through the Hub's work and applied research, including the delivery of the HIS Short Course; through invited engagement in regional

forum such as the Pacific Senior Health Officials Network (PSHON), PHIN, the Pacific Health Ministers Meeting, the Pasifika Medical Association meetings, the Asian HIS leadership forum, SEAMEOTROPED Network Annual meetings and Governing Board meeting; and through work with regional and global partners such as SPC, WPRO, INDEPTH, HMN, and ESCAP activities. Regular meetings with members of the TAG in their broad areas of expertise also happen throughout the year through face-to-face meetings and emails.

### **5.3 AusAID progress report**

The AusAID Independent Progress Report of the Knowledge Hub Initiative made several recommendations about strengthening communication, dissemination and policy and practice translation outcomes. Particular recommendations were made about the quality of various modes of communication and “policy tools” as well as specific recommendations for each of the Hubs. The HIS Hub has paid particular attention to these throughout 2011, with increased professional support to knowledge dissemination and translation aspects of its work, based upon a Communication Strategy. This experience has informed the increased attention to communication, dissemination and knowledge translation in this work plan.

### **5.4 Aid effectiveness review**

The Australian Government’s Aid Effectiveness review was another major policy influence in designing the last 18 months of HIS Hub activities. Background papers and final report recommendations have influenced work plan development, including:

- Making more use of other donor’s capacities and existing mechanisms for harmonised and aligned assistance
- Broadening the range of players engaged with developing aid policy and delivering the aid program
- Linking the types of assistance in the Pacific to capacity and performance, and to build its capacity to demonstrate the effectiveness of health investments, and
- Continuing a focus upon East Asian and South Asian nations.

## **6 Operational Themes**

The HIS Knowledge Hub has distilled cross-cutting operational themes upon which each of its outputs will be consolidated and targeted. Annex 3 provides a visual representation of theme development, key outputs delivered and objectives achieved over the past four years.

### **6.1 Theme 1: Essential HIS investments for health systems strengthening**

In 2009 the Hub hosted two key events on HIS in the Pacific: a meeting of PHIN and a Pacific HIS Development Forum. Both events were designed to synthesise greater knowledge about HIS within the region, and provide an opportunity to discuss common issues and challenges. The global agenda and drivers of HIS were discussed to provide a clearer understanding of how Pacific Island Countries and Territories are positioned within the larger international agenda. The two meetings also provided the opportunity for participants to put forward suggestions for future action.

From the information gaps and cross-cutting issues identified, a number of working papers were developed to provide in-depth analyses of information systems in the region. Following the dissemination of these initial papers, members of the TAG and several senior health policy managers in the Pacific raised a pivotal



issue: in light of these issues and challenges, how can decision-makers be assisted in deciding how best to invest their limited resources for improving their HIS to enable better management and effectiveness of their health system? This question has guided the development of a program of work under Theme 1 to expand the evidence-base and produce guidelines for decision-makers on 'best buys' in HIS, and advocacy tools for HIS managers about the essential nature of HIS investments. Activities (including literature reviews, informal discussions and consultative meetings) were carried out during 2010 to understand the information needs of Ministries and Ministers of Health. A key information gap identified was the need for guidance on what health information technologies warrant investment and the circumstances in which these are best applied. In 2011 a working paper on understanding the role of technology in health was developed (and presented at the Public Health Association of Australia's annual conference). This work will be consolidated in 2012 through:

1. A **working paper** on innovations in monitoring vital events, based on a pilot study in Tanzania, to assess the effectiveness of using SMS technology to improve content, coverage and timeliness of registration of birth and death events. The working paper will describe the actual and potential utility of mHealth solutions for accelerating vital event monitoring and include a costed roadmap for a set of scenarios for how other countries in Asia and the Pacific might adopt this approach.

In addressing the central issue of 'what are the essential HIS investments', a number of working papers, documentation notes and policy briefs were also developed in 2011 and this work will be finalised in 2012 with the development of two core outputs:

2. A **working paper** targeted to senior decision-makers on priority HIS investments for Asia and the Pacific. The objective is to provide decision-makers with action-oriented recommendations on priority investments in HIS based on the sum of Hub activities from 2008 to end-of-contract. Specific policy dissemination forums will be identified early in 2012 with the regional and country partners and our Asian and Pacific networks to ensure the most effective dissemination channels for the policy linked products
3. A **working paper** describing a framework and criteria for assessing the state of a country's HIS. The objective of this paper is to propose a set of measurable indicators that would help countries assess whether they have a fully integrated and functioning health information system according to the HMN Framework. This activity is a continuation of previous Hub work (developing a Rapid Assessment Tool for assessing civil registration systems) and will expand the framework to include all aspects of a HIS.

The final program of work under Theme 1 aims to address a number of (additional) critical issues and questions that have arisen over the past three years. In discussing and exploring essential HIS investments, a number of senior health managers in the region have asked for guidance on how to measure health equity and how to evaluate HIS in regards to their costs and benefits. These questions will be addressed and consolidated in 2012 through (respectively):

4. A **working paper** on the HIS implications of measuring equity in health outcomes and in access to health care. As part of the communication and dissemination of this output, a panel of international experts on health equity will be convened to debate and critically appraise issues raised in the paper and provide their opinion on the regional relevance of issues raised
5. A **working paper** on economic evaluation of data collection systems for vital statistics. Although information systems have supported healthcare services for decades, methods to evaluate data

collection systems for vital statistics data have not been assessed, and decision-makers continue to struggle with demonstrating 'value for money' in terms of investments in information systems. This paper will develop a framework that can be used in real settings to measure the costs and benefits of HIS, based on existing economic evaluation methodologies, while addressing the specific challenges associated with vital statistics in births, deaths and causes-of-deaths.

## 6.2 Theme 2: Strengthening and expanding the HIS workforce

Health Information Systems are a neglected area within health systems despite being a key component. This neglect has led to a critical shortage of qualified health information professionals to undertake work in this field which then has a spill-over effect on the availability for evidence based planning and policy. In 2009 the Hub identified core competencies for HIS, as workforce development was recognized as a major factor in a successful HIS. Since then, the Hub has continued to develop this important program of work through providing training and education, developing a HIS Short Course, and producing new knowledge resources.

There are five core outputs for this theme over the next 18-months:

6. Consolidate the capacity of regional institutions to develop the HIS workforce by delivering the **HIS Short Course** at Fiji National University. This activity will include assessments of the course by participants and facilitators, to allow for re-packaging of course materials for independent delivery by regional institutions
7. Develop a **working paper** on the workforce competencies required for an effective HIS. This paper will describe the core competencies required for the collection, management, analysis and utilisation of HIS data at various levels of the health care system – for those involved in the collection and local use of HIS data to those involved in higher level management, analysis and synthesis of data. In consideration of the audience (the development partners supporting regional HIS development and the countries participating), the work will be disseminated as a document identifying proposed competency pathways for HIS capacity development at the next HIS Leadership Forum and through communication channels existing with these development partners and summarised into a **policy brief** for the HR planners in health and national planning in regional countries. This working paper will also be carried out in collaboration with the HRH Hub
8. **Support PHIN**, as a regional HIS capacity, community of practice and resource, to meet its medium and long term strategic objectives through the development of, and advocacy for, a sustainability plan. While PHIN is recognised as a key partner in supporting national efforts to improve HIS and strengthen work at the regional level, this sustainability plan will provide the required governance structure and resourcing to ensure PHIN continues its work in the region
9. Consolidate the HIS Hub Fellows program by expanding it to a **Leadership and Governance Program**, which will engage regional partners to support the fellows in their work once they return to their health system. The HIS Hub will collaborate with WHO, SPC and partner governments to identify how the theoretical work of the fellows can be built into improved performance and practical outcomes for HIS in their work units
10. Provide **training** on improving the quality of death certification practices. This activity builds on previous work in 2011, where a cause-of-death certification guideline manual was developed and tested with medical students. Based on the outcomes and assessment of the first round of training, in 2012 training will be provided to medical doctors in collaboration with Fiji National University and also the Brisbane Accord Group. This has been repeatedly identified in previous Hub forums and

engagement with countries and development partners as the critical area of HIS requiring improvement in the region.

### 6.3 Theme 3: Strengthening vital statistics and cause-of-death data

Cause-of-death information is the cornerstone of any health information system as it guides policy, planning and resourcing of health priorities. This is particularly important for countries undergoing rapid epidemiological transition. Many countries are unaware of the poor functioning of their vital statistic systems and of the methods and measures that can provide information on population health status. Furthermore, in the recently released '*Keeping Promises, Measuring Results*', the Commission on Information and Accountability for Women's and Children's Health listed 'better information for better results' as their top recommendation for improving the health of women and children. Increasing the number of countries with well-developed systems to measure births, deaths and causes-of-death (vital statistics) was also listed as the top priority for improving information, which aligns with the Hub's continued investment in vital statistics in the Asia-Pacific region.

To continue assisting countries to evaluate and strengthen the functioning of their vital statistics systems the Hub will:

11. Finalise and support application of the **Resource Kit**. In 2011, the Hub developed a draft of a "Resource Kit" that provides strategies and tools for developing and improving civil and vital registration systems depending on a country's level of development. To ensure the effectiveness of the Kit, it will be applied in coordination with workshops being held as part of the Pacific Vital Statistics Improvement Strategy during 2012. Participants from health, civil registration and statistics from Fiji, Tonga, Samoa, Papua New Guinea, Vanuatu and the Solomon Islands will be invited to provide feedback on the effectiveness of the Kit. Selected country applications of the Kit will also be undertaken in collaboration with ESCAP and other development partners as part of the Regional Initiative for improving Civil Registration, led by ESCAP and WHO. Discussions will also be facilitated on the potential for developing an online version of the Kit
12. Continue implementation of the **Pacific Vital Statistics Improvement Strategy (PVSS)**. The PVSS was launched by the Hub in 2010, in close collaboration with key regional development partners, particularly SPC. It aims to assist countries to improve their vital statistics and civil registration practices by directly engaging with country stakeholders and supporting them to develop their own country improvement plans. Part of this approach includes harmonizing activities of regional development and academic institutions through the HIS Hub-led initiative, and now regionally owned, Brisbane Accord Group (BAG). The HIS Hub will continue to provide technical direction and strategic leadership to BAG and actively engage with SPC and other partners during the next 18-months to ensure vital statistics development activities in the region are coordinated and effective
13. Develop a **vital statistics and civil registration short course**. Participants at the HIS Hub Short Course expressed a desire for additional capacity building in the area of civil registration and vital statistics, particularly with regard to analytic methods to be used for analysing data quality and completeness. The purpose of this course is to make available, in a readily understandable format, all the new methods that have been developed by the Hub and under the Global Burden of Disease project to critically analyse the quality of vital registration data, population data, and be able to derive essential indicators from the data on MDGs four, five and six, as well as for monitoring NCDs. The longer-term (2013-2014) objective of developing this course is to have it embedded into the

annual program of training courses offered by the UN Statistical Development Program for Asia and the Pacific

14. Develop a **working paper** on building capacity for vital statistics development and utilization, which will synthesise learning's from this program of work in the Pacific and transfer it to Asia. Five to six countries in Asia will be supported, leveraging of other development partners programs, to carry out comprehensive assessments of their vital registration systems. This will include a detailed assessment of the current state of each system, as well as the development of a strategic, prioritised country action-plan using Hub tools and procedures to improve vital statistics and civil registration
15. Develop a **working paper** on validating the causes of death reported through vital registration systems using medical record reviews. This output consolidates work initiated in 2010, which reviewed the quality of medical records in Sri Lanka, and will expand the knowledge-base by carrying out a more systematic review of studies in other regions of the world. The knowledge gained will assist countries to understand the critical importance of ensuring quality and accuracy in their cause-of-death data (as it is widely used for planning). This working paper will provide countries with a methodology for them to assess data quality, and to improve data accuracy through periodic evaluation of practice.

#### 6.4 Theme 4: Health information systems strengthening for MDGs

In developing this work plan the HIS Hub has additionally responded to major themes arising globally and regionally about public health needs and issues. Throughout 2011, a major focus has been placed on addressing non-communicable diseases (NCDs) at several meetings including the World Health Assembly, the Ministers of Health Meeting in Russia, the Pacific Health Ministers Meeting in Honiara, the PSHON meeting in Cairns and the UN General Assembly Special Session in New York. Recent discussions in the Pacific e.g. PSHON, have focused on wanting concrete ideas of how to actually address these issues, going beyond the advocacy to policy and practice.

Representatives from the HIS Hub, PHIN members and/or other Hub partners have attended many of these meetings, and the importance of health information systems to measure and evaluate the size of the problem, and monitor trends in these issues and risk factors were highlighted. This includes clauses 45 (k) and (j) of the UN General Assembly Political Declaration on the Prevention and Control of NCDs, noting the need to, *'strengthen, as appropriate, information systems for health planning and management, including through the collection, disaggregation, analysis, interpretation and dissemination of the data and the development of population based registers and surveys, where appropriate, to facilitate appropriate and timely interventions for the entire population'* and *'give greater priority to surveillance'*. Further, clause 58 states the need to *'promote the use of ICT to improve ... reporting and surveillance systems'* and throughout the resolutions calls upon the need to identify evidence-based cost-efficient interventions, and strengthened monitoring and evaluation systems that, *'are integrated into existing national health information systems and include the monitoring of risk factors, outcomes, social and economic determinants of health, and health systems responses'*. WHO has been tasked to develop, in partnership with the countries and partners, a set of global targets and indicators by the end of 2012.

This emphasis on NCDs does not displace, but rather needs to be developed in parallel with the continued focus on strengthening HIS to better measure progress towards the MDGs, especially goals 4, 5 and 6, which are traditionally seen as primarily health sector goals. The HIS Hub has purposefully concentrated on improving skills and knowledge in vital registration because it is the unique data source required to

continuously monitor progress with both NCD control strategies and MDGs and through this evidence provide a solid foundation in countries for policy dialogue and action responses. Within the region Health Ministers and other senior health decision-makers have called for improvements in the quality of data, with more reliance upon country-owned data (not global agency estimates), and the importance of the role of vital statistics and civil registration to provide baseline data for evidence-based planning of intervention roll-out to reduce mortality and morbidity.

In order to move forward decidedly and successfully, a clear understanding of the information and data needed for management and planning is essential. As such, the Hub will produce two products for this theme:

16. A **working paper** on the HIS implications for three aspects of NCD monitoring: exposure to risks, mortality by cause-of-death, and implementation of programs, as identified by the global NCD Summit Conference. The objective of this working paper is to provide guidance to decision-makers in the Asia-Pacific region about how to measure, what to measure, and how to interpret the results of NCD monitoring. Additional recommendations on the 'best buys' for developing countries will also be included here, such as the most effective indicators at service delivery, district, regional and national levels for service providers, managers, decision-makers and for resource allocation
17. A **working paper** on strengthening the evidence base for the control of neglected tropical diseases (NTDs). This working paper will look at the development and allocation of HIS resources (human, physical and financial) required to develop cost-effective and sustainable approaches to the management of NTDs. The purpose of this work is to help countries better orientate their disease-control programs for NTDs, a continuing source of disease burden in many populations, by strengthening and focussing their health information support systems. Experts will be brought together to assess and recommend improvements to the way in which HIS in these countries are being used (or not) to more effectively support NTD control programs.

The final product from the 2012-13 work plan is a consolidation piece on previous investments in child health indicators in the Pacific. In 2010, the Hub successfully completed a two-country (Samoa and Tonga) study on child health indicators and in 2011 the results were disseminated and specifically packaged for policy makers. To finalise this work, the Hub (in partnership with the Pacific Health Unit at the University of Auckland, New Zealand) will produce:

18. A final **report** from the Child Health Indicator Project, building on the recently-released HMN report, which will outline key progress indicators for monitoring maternal, newborn and child health in the Pacific. This report will outline the main opportunities and challenges for monitoring maternal and child health in the Pacific, based on findings from 2010 and 2011, and drawing on the framework established by HMN. It is planned that the Maternal and Child Hub will provide collaborative assistance to this output.

## 7 Communication and Dissemination

The HIS Hub has developed a strategic approach for communicating Hub knowledge, including the establishment of a **Communications Officer**, contracting of an **external editorial team** and development of a **Communication Strategy**. The Strategy is informed by the *Independent Progress Report* which identified a range of issues surrounding achievement of the overall aim of the Hubs with emphasis on the practical value and usage of Hub outputs. The bulk of the recommendations and strategies to achieve those were focused on improved communication with Hub stakeholders.

To support the achievement of the Hub's aim and objectives, the goal of the HIS Hub Communication Strategy is to **strengthen health systems through the uptake of Hub knowledge products to support evidence-based policy and practice**. To achieve this aim the following key communications objectives need to be met:

- Effectively disseminate HIS Hub products to primary and secondary audiences
- Increase use of HIS Hub knowledge products by donor partners and country health systems for policy and practice change
- Influence HIS policy in the Asia Pacific region through the practical application of HIS Hub knowledge products
- Strengthen capacity in the Asia Pacific region for stakeholders to participate effectively in the development of HIS Hub knowledge products.

Recommendations of the *Independent Progress Report* emphasised the need for Hubs to work with stakeholders to increase their participation and usage of Hub materials. The HIS Hub works on the principle that successful dissemination and uptake will engage the key audiences by delivering what the audience wants and needs in a way that supports its utilization for policy, practice or capacity strengthening. With these objectives in mind the following audiences will be targeted through the Communication Strategy:

### Primary audiences

- Australian Agency for International Development (AusAID) advisers
- AusAID Australia-based program staff
- AusAID in-country staff
- Ministry/National Department of Health staff in the Asia Pacific region with a focus on:
  - Ministers of Health and Planning
  - Secretaries and Deputies for Health and Planning
  - Practitioners, such as clinicians and service planners
  - HIS managers in health sector and other relevant sectors

### Secondary audiences

- Other Aid Program donors and technical partners working in the Asia Pacific Region specifically:
  - WHO
  - UN agencies
  - Secretariat of the Pacific Community
  - New Zealand Aid Program
  - USAID, DFID

- Academics
- Networks participating in health information systems activities.

Other communication and dissemination activities have been influenced by the *Independent Progress Report* and include:

- The application of a ‘productising’ approach: working paper to policy brief to case study, supported by narrated PowerPoints, summary statements and headliners
- Creation of a common branding and template approach to generate consistent and recognizable visual look and feel to all outputs
- Appointment of Communication Specialist to manage: a) the work of transforming research outputs to more general communication pieces; b) maintain the website and; c) manage stakeholder engagement mechanisms including dissemination and relevant convening activities.

Additionally, the four Hubs with AusAID have developed an electronic newsletter which went prior to the time of the cross-Hub forum (*Hub Flash*). This will address many of the recommendation of the Mid-term Review about alerting stakeholders and audiences of new materials and activities by the Initiative and branding of the initiative as well as accessibility of the Hub products to the internal AusAID audience.

## 7.1 Outputs

Experience tells us that the audience of the Hub is diverse and includes policy makers, academics, health information systems practitioners and development agency staff—across a range of technical and program levels. In keeping with the diversity of our audience, a range dissemination activities and communication tools are required (Table 1). All tools will be available electronically (email, web, CD-ROM and multimedia), with low resolution materials and easily printable formats. The Hub website will continue to be improved to allow for easy access to knowledge products and other relevant resources, and optimal navigation of information, as well as providing a forum for interactive knowledge exchange between the various HIS communities and practitioners. Face-to-face presentations and activities will continue to be an essential communication channel; acknowledging that for some cultures, the most successful channels are those that engage the audience face-to-face in environments where web connectivity is limited and relationships are critical to confidence in a message.

As well as the communication and dissemination tools described above, over the next 18-months the Hub will produce the following outputs:

1. Deliver a **writers workshop** for HIS staff who are involved in the development of annual plans and/or reports, policy briefs and other communication activities. The aim of this workshop is to provide practical guidance on how to write effectively for influencing evidence-based decision-making and it will be held collaboratively with Fiji National University and Biotext (external editorial team) as part of the HIS Short Course. As well as providing an important avenue for the communication and dissemination of Hub- and HIS-specific resources, this workshop will grow capacity of the HIS workforce in the region
2. Publish a special supplementary edition on HIS in the **Pacific Health Dialog**, with contributions from PHIN members, other HIS professionals in the region, international experts and other Hubs. The main aim of the journal is to provide a platform for an international exchange of experiences and opinions on all aspects of health in the Pacific. The scope of the journal is for all major health

professional groups including doctors, nurses, physiotherapists, administrators, educators, medical assistants and technicians. It is also of interest to academics working in the Pacific. The ultimate goal of the Dialog is to contribute towards improved health care and health outcomes for all Pacificans.

**Table 1** Communication tools by audience

<b>Audience</b>	<b>Policy briefs</b>	<b>Summaries</b>	<b>Conference papers</b>	<b>Teaching materials</b>	<b>Country briefs</b>	<b>Working papers &amp; documentation notes</b>	<b>Published papers</b>
Ministers of Health and Planning	x		x				
Secretaries and Deputies for Health and Planning	x						
Practitioners, such as clinicians and service planners		x	x				
HIS managers in the health sector and other relevant sectors		x		x			
AusAID in-country staff		x			x		
AusAID Australia-based program staff	x	x					
AusAID advisers	x	x					
Other Aid Program donors and technical partners working in the Asia Pacific Region	x	x			x	x	
Networks participating in HIS activities	x	x	x	x	x	x	x
Academics				x		x	x
Non-government agencies and organisations (e.g. SPC, WHO, UNESCAP)	x	x			x	x	x

## 8 Capacity Building

The need for a specific strategy for building capacity in HIS was identified in 2008 by the TAG, with further discussion on this need carried out in a Capacity Building Think-Tank carried out later that year. Since then, the Hub has committed to building HIS capacity in the Asia Pacific region, and capacity building underpins all themes (however there are some themes which have capacity building as a key output). Core capacity building mechanisms and activities for the 2012-2013 work plan include:

- Continued support of PHIN, including providing training and education sessions at the end of all PHIN meetings and actively promoting upcoming HIS events in the region to PHIN members
- Development of curriculum on vital statistics and civil registration
- Synthesis of existing knowledge on the workforce competencies for an effective HIS
- Transferring the HIS Short Course to regional institutions for expansion and long-term implementation
- Expanding the fellowship program into a Leadership and Governance Program, to provide ongoing assistance to fellows once they return to their health system
- Providing training on improving the quality of death certification and improving the quality and use of data, including the development of trainers guides and manuals to be used in the region



- Developing and launching the resource kit, including online modules to ensure effectiveness and reach within the region.

## 9 Convening and strategic engagement

The HIS Knowledge Hub launched its strategic work programs on a strong foundation of existing relationships and strategic alliances. These important relationships with a range of domestic and international partners are a continuation of the significant investments the Hub has made since it was launched in 2008. During 2011, the HIS Knowledge Hub invested into sustaining existing relationships with leading academic institutions worldwide, as well as with local and international partners including:

- |  |  |
|--|--|
| • ABS  | • IFHIMA                                       |
| • AIHW   | • INDEPTH                                      |
| • AusAID, Canberra, regional and country based staff | • QUT  |
| • DoHA   | • UNFPA  |
| • ESCAP  | • UNICEF                                       |
| • FNU  | • SEAMEO-TROPED Network                        |
| • HIMA   | • SPC  |
| • Health Metrics Network                             | • Pacific Ministries of Health                 |
|  | • WHO - Geneva, WPRO, SEARO, Suva and Vanuatu. |

## 10 Monitoring and Evaluation

The monitoring and evaluation (M&E) framework will facilitate the tracking of progress of the HIS Hub's activities and achievements, enable monitoring of the performance of the Hub against the agreed objectives and identify achievement against the higher order aim of the Hub initiative. Indicators are objectively verifiable, specific, measurable, achievable, realistic and timely. The framework incorporates both quantitative and qualitative aspects of monitoring and evaluation where ever possible. Overall, the M&E framework is aligned to the AusAID strategic goal of 'saving lives' and is linked to their six pillars for investment in health. There are four aims and ten key objectives that Hub work will be assessed against:

- |  |   |
|--|---|
| • Aim 1.1: Level of change in policy and practice                        | • Objective 1.1: Relevance of Hub themes                    |
| • Aim 1.2: Contribution of Hub to changes in country policy and practice | • Objective 1.2: Classification of knowledge outputs        |
| • Aim 1.3: Contribution to AusAID and Government of Australia priorities | • Objective 1.3: Quality of contribution to knowledge       |
| • Aim 1.4: Contribution to the policy-making environment                 | • Objective 1.4: Scientific quality of process              |
|  | • Objective 2.1: Engagement of external groups              |
|  | • Objective 3.1: Methods of dissemination and communication |
|  | • Objective 3.2: Quality of communication materials         |
|  | • Objective 3.3: Effectiveness of communication             |
|  | • Objective 4.1: Internal capacity building                 |
|  | • Objective 4.2: Partner capacity building                  |

At the output level, monitoring involves simply ensuring completion of activities and achievements as planned and in the given time period through basic quantitative assessment, i.e. checking whether the planned tasks are completed and the expected number of papers, guidelines, etc are produced. It also involves checking whether the outputs meet the expected quality. Quality checks will be done through external/peer reviews, including by the Technical Advisory Group (TAG), which meets annually to review the work of the Hub.

As the Hub initiative is in its last 18 months of this phase, some outcome measures will be appropriate and collected through qualitative and quality indicators, namely:

- Most significant change analysis of practice and policy changes in HIS and the use of evidence to manage, monitor, plan and evaluate health programs
- Citation index of any work published (peer review or working paper) over the duration of the Hub
- Evaluation surveys of the specific communication and dissemination activities (as well as the cross Hub initiative of email alerts)
- Evaluation surveys of capacity building activities
- Most significant change analysis of fellows and short course participants.

Evaluation will also be done at the cross-Hub level by an external evaluator. Potential users of the Hub's products and expected uptake and outcomes will be identified to assist the evaluation process.

## Annex 1 Budget

Compared with previous years, the HIS Hub budget for 2012-13 has an increased emphasis on external communication and dissemination and monitoring and evaluation. The proposed budget for the HIS Knowledge Hub work plan 2012-2013 is as follows:

	DESCRIPTION	TOTAL \$
	AusAID income 2012-2013	3,000,000
	HIS Hub balance as at December 31 2011	1,246,236
	<b>Total income</b>	<b>4,246,236</b>
<b>P</b>	Personnel	1,613,930
<b>I</b>	Support country collaborators / product development / key objectives	734,730
<b>T</b>	Training / Education	214,750
<b>C</b>	Consultation	416,875
<b>E</b>	External communication / dissemination	735,575
<b>M</b>	M&E Development	80,000
<b>A</b>	Administration and management costs	378,700
	Strategic contingency	71,676
	<b>Total expenses</b>	<b>4,246,236</b>
	<b>Balance</b>	<b>0</b>

## Annex 2 Implementation Schedule

Output	Jan – Jun 2012						Jul – Dec 2012						Jan – Jun 2013					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Theme 1: Essential HIS investments for health system strengthening</b>																		
1: Working paper on innovations in vital events																		
D1: Dissemination tasks																		
2: Working paper on priority HIS investments																		
D2: Dissemination tasks																		
3: Working paper on framework and criteria for assessment																		
D3: Dissemination tasks																		
4: Working paper on the HIS implications of measuring equity																		
D4: Dissemination tasks																		
5: Working paper on economic evaluation of HIS																		
D5: Dissemination tasks																		
<b>Theme 2: Strengthening and expanding the HIS workforce</b>																		
6: Technology transfer of short course																		
D6: Dissemination tasks																		
7: Working paper on workforce competencies for HIS																		
D7: Dissemination tasks																		
8: PHIN sustainability plan																		
D8: Dissemination tasks																		
9: HIS leadership and governance program																		
D9: Dissemination tasks																		
10: Improving the quality of death certification																		
D10: Dissemination tasks																		
<b>Theme 3: Strengthening vital statistics and cause-of-death data</b>																		
11: Resource kit pilot and launch																		
D11: Dissemination tasks																		
12: Implementation of Pacific vital statistics strategy																		
D12: Dissemination tasks																		

Output	Jan – Jun 2012						Jul – Dec 2012						Jan – Jun 2013					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
13: Vital statistics short course																		
D13: Dissemination tasks																		
14: Working paper on building capacity for vital statistics																		
D14: Dissemination tasks																		
15: Working paper on validating cause-of-death data																		
D15: Dissemination tasks																		
<b>Theme 4: Health information systems strengthening for MDGs</b>																		
16: Working paper on the implications of NCDs																		
D16: Dissemination tasks																		
17: Working paper on the implications of NTDs																		
D17: Dissemination tasks																		
18: Report on monitoring maternal, neonatal and child health																		
D18: Dissemination tasks																		
<b>Communication and dissemination</b>																		
C1 Building advocacy capacity for HIS																		
C2 Special HIS edition in Pacific Health Dialog																		
C2 Revise and implement communication strategy																		
C3 Communication and dissemination tools																		
C4 Inputs into Health Hub Flash																		
C5 Dissemination presentations																		
C6 Staff development																		
<b>Monitoring and evaluation</b>																		
M&E1: Lessons learned on the role of networks																		
M&E2: Lessons learned on cause-of-death capacity building																		
M&E3: Lessons learned on countries																		
M&E4: Evaluation of all Hub activities																		

## Annex 3 Theme development

### Theme 1 Essential HIS investments for health system strengthening

2009	2010	2011	2012-2013
<b>Outcomes</b> <ul style="list-style-type: none"> <li>Identified the information gaps and cross-cutting issues in HIS for a more in-depth analysis</li> <li>Critical assessment of prior HIS developments</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Assessing health systems performance using information on effective coverage of interventions (#03)</li> <li>Improving the quality and use of health information: essential strategic issues (#05)</li> <li>Role of health surveys in national health information systems: best use scenarios (#06)</li> <li>Issues and challenges for health information systems in the Pacific: findings from the PHIN meeting and the Pacific health information systems development forum (#07)</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>Health information systems: a case study of Vanuatu (#03)</li> <li>Health Information systems: a case study of Wallis and Futuna (#04)</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Health information needs of Ministers identified</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Preparing routine health information systems for immediate health responses to natural disasters (#12)</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>Establishing the health information needs of Ministries and Ministers of health: findings from a literature review (# 05)</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Key information issues for leadership and governance identified</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Understanding the role of technology in health information systems (#17)</li> <li>Conceptualising the information needs of senior decision makers in health (#18)</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>Building the evidence base for health policy: guidelines for understanding and utilising basic health information (#13)</li> <li>Analysing parliamentary questions to determine the information needs of senior decision makers in health (#14)</li> </ul> <b>Outputs: Issue Briefs</b> <ul style="list-style-type: none"> <li>Why are health information systems important?</li> <li>National use of health surveys</li> </ul> <b>Outputs: Policy Briefs</b> <ul style="list-style-type: none"> <li>ICT in health information systems: benefits, opportunities and the determinants of success</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Guidelines on essential HIS investments for decision-makers developed</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Innovations in monitoring vital events</li> <li>Priority HIS investments for Asia and the Pacific</li> <li>Framework and criteria for assessing country HIS</li> <li>HIS implications of measuring equity in health outcomes</li> <li>Economic evaluations of HIS</li> </ul> <b>Outputs: Policy Briefs</b> <ul style="list-style-type: none"> <li>Priority HIS investments for Asia and the Pacific</li> </ul>

## Theme 2 Strengthening and expanding the HIS workforce

2009	2010	2011	2012-2013
<b>Outcomes</b> <ul style="list-style-type: none"> <li>• Strong networks developed</li> <li>• Capacity Building Think Tank hosted</li> <li>• PHIN meeting hosted</li> <li>• Pacific HIS Development Forum hosted</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>• Issues and challenges for health information systems in the Pacific: Findings from the PHIN meeting and the Pacific health information systems development forum (#07)</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>• Delivery of intensive five day HIS short course</li> <li>• Delivery of short course on how to improve the use of existing data</li> <li>• Pilot testing of death certification curriculum at FNU</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>• Making better use of existing datasets to strengthen the evidence base for health policy: report on a training workshop in Samoa, October 2010 (#06)</li> <li>• Monitoring vital events resource kit: rationale, outline and development plan (#09)</li> </ul> <b>Outputs: Journal Article</b> <ul style="list-style-type: none"> <li>• Teaching cause-of-death certification: lessons from international experience</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>• Delivery of short course on cause-of-death certification for physicians</li> <li>• Delivery of training on improving the quality of death certification</li> <li>• Delivery of training on improving the quality and use of data</li> <li>• Launch of PHIN Regional HIS Strategic Plan</li> <li>• Pacific HIS Forum hosted</li> <li>• Fellows hosted at HIS Hub</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>• Improving cause-of-death certification practices in the Pacific: findings from a pilot study of the WHO web-based ICD training tool (#16)</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>• Training the HIS workforce in Fiji to maximize the utilization of existing datasets (#15)</li> </ul> <b>Outputs: Policy Briefs</b> <ul style="list-style-type: none"> <li>• Why strengthen health information systems in the Pacific and how could this be done?</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>• Technology transfer of HIS Short Course to regional institutions</li> <li>• Development of PHIN Sustainability Plan</li> <li>• Delivery of HIS Leadership and Governance Program</li> <li>• Fellows hosted at HIS Hub</li> <li>• Delivery of workshops on how to advocate for HIS in the region</li> <li>• Publication of special HIS edition of the Pacific Health Dialog</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>• Mapping workforce competencies for an effective HIS</li> <li>• The role of networks in aid effectiveness</li> </ul> <b>Outputs: Trainers Manual and Facilitators Guide</b> <ul style="list-style-type: none"> <li>• Improving the quality of death certification</li> <li>• Improving the quality and use of data</li> </ul>

### Theme 3 Strengthening vital statistics and cause-of-death data

2009	2010	2011	2012-2013
<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>Development of detailed tool for assessing the quality and functioning of country vital registration systems</li> </ul> <p><b>Outputs: Working Papers</b></p> <ul style="list-style-type: none"> <li>Improving the quality of birth and cause-of-death information: guidelines for a standards-based review of country practices (#01)</li> <li>Rapid assessment methods for vital statistics systems (#02)</li> <li>Teaching cause-of-death certification: lessons from international experience (#04)</li> <li>Assessing the quality of vital statistics systems: lessons from national evaluations in Sri Lanka and the Philippines (#08)</li> </ul> <p><b>Outputs: Documentation Notes</b></p> <ul style="list-style-type: none"> <li>Assessing the production, quality and use of national vital statistics: a case study of Sri Lanka (#01)</li> <li>Assessing the production, quality and use of national vital statistics: a case study of the Philippines (#02)</li> </ul> <p><b>Outputs: Tools and Guidelines</b></p> <ul style="list-style-type: none"> <li>Rapid assessment of national civil registration and vital statistics systems</li> <li>Improving the quality and use of birth, death and cause-of-death information</li> </ul>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>Development of Brisbane Accord Group (BAG)</li> </ul> <p><b>Outputs: Working Papers</b></p> <ul style="list-style-type: none"> <li>Rapid assessment of vital statistics systems: evaluation of the application of the WHO/ HIS Hub tool in 26 countries in the Asia-Pacific region (#10)</li> <li>Mortality statistics: a tool to enhance understanding and improve quality (#13)</li> <li>Promoting the periodic assessment of the quality of medical records and causes-of-death data: lessons learnt from a medical records study in Sri Lanka (#14)</li> <li>Advocating for civil registration: guide to developing a business case for civil registration systems(#15)</li> </ul> <p><b>Outputs: Documentation Notes</b></p> <ul style="list-style-type: none"> <li>Routine mortality and cause-of-death reporting and analysis systems in seven Pacific Island countries (#08)</li> <li>Monitoring vital events resource kit: rationale, outlined and development plan (#09)</li> <li>Symptom recall and the diagnostic accuracy of verbal autopsies (#11)</li> <li>An assessment of mortality estimates for Fiji: 1949-2008: findings and life tables (#12)</li> </ul>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>Launch and implementation of Pacific Vital Statistics Action Plan</li> </ul> <p><b>Outputs: Tools and Guidelines</b></p> <ul style="list-style-type: none"> <li>Guidelines for doctors on cause-of-death certification</li> <li>Resource Kit</li> </ul>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>Countries assisted in accessing resources on civil registration and vital statistics</li> <li>Improved civil registration systems in Asia and the Pacific</li> <li>Delivery of vital statistics and civil registration short course</li> </ul> <p><b>Outputs: Working Papers</b></p> <ul style="list-style-type: none"> <li>Building capacity for vital statistics development and utilisation</li> <li>Validating the causes of death reported through vital registration systems using medical records reviews</li> </ul>



## Theme 4 HIS strengthening for MDGs

2009	2010	2011	2012-2013
<b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Critical issues in the Development of health information systems to support environmental health policies and programs: a case study of Ciguatera (#09)</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Establishment of a Pacific Pediatrician group</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>Making sense of maternal mortality estimates (#11)</li> </ul> <b>Outputs: Documentation Notes</b> <ul style="list-style-type: none"> <li>Pacific child health indicator project (#07)</li> <li>Integrating existing datasets to manage key health priorities: the case of mosquito-borne disease (#10)</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Presentation on the neglected HIS issues for NCD management to the Pacific Senior Health Officials Network (PSHON)</li> <li>Hosted the Joint Management Committee (JMC) meeting on NCDs</li> </ul> <b>Outputs: Policy Briefs</b> <ul style="list-style-type: none"> <li>Making sense of maternal mortality estimates</li> <li>Pacific child health indicator project: information for action</li> </ul>	<b>Outcomes</b> <ul style="list-style-type: none"> <li>Countries have a clear understanding of the information and data needed for the management and planning of MDGs, NCDs and NTDs</li> </ul> <b>Outputs: Working Papers</b> <ul style="list-style-type: none"> <li>The HIS implications of global aid trends for emerging disease burdens: NCDs</li> <li>Strengthening the evidence-base for the control of neglected tropical diseases</li> <li>Report on monitoring maternal, neonatal and child health for the Pacific</li> </ul>