Milestones of PPHSN development

- **1995** Inter-agency Meeting on Health Information Requirements in the South Pacific was held in Noumea.
- 1996 The Pacific Public Health Surveillance Working Group, given its mandate by the Fifteenth Regional Conference of Heads of Health Services in Noumea, prepared the ground for PPHSN. Two meetings of the PPHSN Working Group were organised. Pacific Islands Meeting on Public Health Surveillance, co-organised by SPC and WHO, was held in Noumea: PPHSN was created. The Working Group became the Coordinating Body of PPHSN, with SPC as Focal Point.
- **1997 PacNet** was established. Pacific Hospital-based active surveillance system was established by WHO under PPHSN as part of the Global Polio Eradication Initiative.
- 1998 A reference report Service-oriented Training in Public Health: A Model for Enhancing Public Health Surveillance in the Pacific was produced.
 The monograph Public Health Surveillance in the Pacific was published.
 Production of Inform'ACTION, the bulletin of PPHSN, started.
 Pacific Telehealth conference took place in Noumea.
 5th Meeting of the PPHSN-CB was held in Noumea.
- **1998-2001** Two series of sub-regional training sessions in public health surveillance and the use of Epi Info 6 were organised by SPC.
 - **1999** Training programme for Diploma in Public Health Practice started at the Fiji School of Medicine (FSMed).

Meeting on epidemiological surveillance of HIV, AIDS, STIs and other communicable diseases with outbreak potential for Pacific Island countries was organised.

In March 1999, the PPHSN work was acknowledged and further encouraged by both the Sixteenth Regional Conference of Heads of Health Services (16 March) and the Meeting of the Ministers & Directors of Health for the Pacific Island Countries (18-19 March), held back to back in Koror, Republic of Palau.

 2000 Training programme for Master of Public Health Practice started at FSMed. Inaugural meeting of PPHSN Public Health Laboratory Network (LabNet) was held.
 6th Meeting of the PPHSN-CB was held prior to the LabNet meeting. PacNet-restricted was established to allow not-yet verified information on outbreaks to be circulated as early as possible amongst the Pacific Island Departments or Ministries of Health and some key allied members of PPHSN. *Pacific Health Dialog* issue on Telehealth was published. A PPHSN Team assisted the Federated States of Micronesia with the investigation and control of a cholera outbreak.

2001 PPHSN Coordinating Body held its 7th meeting to prepare a report on the advancement of the PPHSN for the Pacific Island Ministers and Directors of Health Meeting held one week after.

In March 2001, PPHSN achievements were recognised at the Pacific Island Ministers and Directors of Health Meeting in Madang, Papua New Guinea, and the draft strategic plan initiated by the PPHSN Coordinating Body was endorsed for further development. The setup of national EpiNet response teams was proposed by WHO and endorsed by the meeting.

Pacific Island countries and territories (PICTs) nominated their EpiNet response teams: **EpiNet**, the response arm of PPHSN, was established.

Dec 2001-Mar 2002 Sub-regional EpiNet workshops I, II and III were held in Guam, New Caledonia and Samoa,

with draft surveillance and response guidelines developed for the six priority epidemic diseases of PPHSN and recommendations written for Pacific organisation, collaboration and communication in this area.

2002 Series of training sessions in epidemiology and outbreak investigation started.

sth Meeting of the PPHSN Coordinating Body was held immediately after the first LabNet Technical Working Body (TWB) meeting. The development of LabNet was thus one of the main items discussed.

PPHSN website was created: http://www.pphsn.net

PPHSN linked with US resources against bioterrorism.

Evaluations of rapid diagnostic kits for leptospirosis and dengue were carried out by the Pasteur Institute of New Caledonia.

2003 Response to severe acute respiratory syndrome (SARS) threat: PPHSN SARS Task Force was created and PPHSN Guideline for the Preparedness, Surveillance and Response to SARS in PICTs was developed, published online and regularly updated.

Regional EpiNet and LabNet workshops were organised, with the following main areas addressed: SARS and infection control, planning against influenza, PPHSN projects, PPHSN extension to other diseases, International Health Regulations (IHR), and LabNet development.

9th Meeting of the PPHSN-CB was held before the regional EpiNet and LabNet workshops and focused on the preparation of these meetings.

PPHSN Strategic Plan 2003-2006 was developed.

Research project 'Multi-centre survey on incidence and public health impact of leptospirosis in the Pacific' was developed and implemented.

At the Pacific Island Ministers of Health Meeting held in Nukualofa, Tonga, in March 2003, it was again acknowledged that the PPHSN continued to play an essential public health role in the region, and the importance of strengthening the capacity of the PPHSN-CB and the CB focal point at SPC was recognised.

2004 Second Regional EpiNet Workshop on 'PPHSN preparedness for influenza and other potential threats like dengue and SARS' was organised.

10th Meeting of the PPHSN-CB was held prior to the second regional EpiNet Workshop. PPHSN Influenza Specialist Group was formed.

Advice on avian influenza (bird flu) for human health and animal health was compiled by PPHSN partners.

PPHSN guidelines for influenza preparedness and control and influenza pandemic preparedness was developed (published in 2005).

PPHSN Technical Working Group on Foodborne Disease Surveillance was identified. Project on 'Building ICT capacities for public health surveillance' was launched in US-affiliated PICTs.

2005 Data for **Decision Making (DDM) training course** (a Pacific model of the Field Epidemiology Training Programme) commenced.

PPHSN Coordinating Body held its 11th meeting back-to-back with a WHO workshop on the International Health Regulations (IHR) and pandemic influenza preparedness and a meeting of the PPHSN Influenza Specialist Group.

Projects to support influenza surveillance and pandemic preparedness were initiated. Infection control (IC) measures were promoted and PICTs' IC capacity was assessed. Workshop on identification and surveillance of vector mosquitoes was organised in Guam. Pacific Entomological Assessment Project was initiated.

At the Pacific Island Ministers of Health Meeting held in Samoa in March 2005, surveillance and response were discussed in the framework of the PPHSN, especially regarding the role the network should play with regards to the implementation of the new International Health Regulations (IHR), pandemic influenza preparedness and dengue control.

2006 PICNet, the Pacific Regional Infection Control Network, was launched.

Regional workshop 'LabNet 2006' was organised with the following main areas addressed: PPHSN target disease testing, quality systems in the laboratory and training issues.

First regional Asia-Pacific training course on leptospires and leptospirosis was organised.

First Global Salmonella-Surveillance Regional Training Course for PICTs was organised.

12th meeting of the PPHSN-CB was held and focused on avian influenza and pandemic influenza preparedness, workforce development and PPHSN organisation.

Pacific Regional Influenza Pandemic Preparedness Project (PRIPPP) 2006-2011 was finalised and its implementation started.

Laboratory-based influenza surveillance project 'Increasing influenza surveillance in the Pacific Island region' commenced in five PICTs.

Workshop on identification and surveillance of vector mosquitoes was organised in the Northern Mariana Islands.

Pacific Health Dialog issue on Pacific health surveillance and response was published. *Directory of PPHSN Resources* was published.

2007 Pacific Avian and Pandemic Influenza taskforce (PAPITaF) was formed.

13th PPHSN-CB meeting took place just after the PAPITaF meeting to prepare the content of a new PPHSN-CB Action Plan for three years,

Support for pandemic influenza preparedness in the PICTs continued: preparedness plans were developed and testing exercises were conducted.

Projects on vector surveillance and control in the Pacific were developed.

Inform'ACTION #27 dedicated to dengue fever with a preliminary report of Zika virus outbreak in Yap was published.

Workshops on mastering epidemiological data and vector surveillance and control were organised in the Cook Islands.

At the Ministerial meeting held in Vanuatu in March 2007, PPHSN and its services were mentioned as existing and useful mechanisms for supplementing and strengthening surveillance and response capacities in the PICTs and building core capacities for IHR.

2008 Training workshops on infection control were conducted.

Posters on Infection control (IC) were produced.

14th PPHSN-CB meeting was held with discussions on all the services of PPHSN. Second Pacific WHO Global salmonella surveillance training course was organised. Second Pacific Avian and Pandemic Influenza taskforce meeting was organised. Regional Dengue Meeting was organised.

15th PPHSN-CB meeting took place just after the dengue meeting.

A survey on the utility of Inform'ACTION was conducted with positive feedback.

2009 Response to pandemic influenza A(HIN1) 2009: updates, advices and guidelines were developed, surveillance of influenza-like illness cases and confirmed cases of influenza A(H1N1) implemented with weekly reports and maps shared through PacNet and PPHSN website, and a tri-agency support on risk communication was initiated.

Inform'ACTION #31 dedicated to pandemic influenza A(H1N1) 2009 in the PICTs was published. First DDM candidates from Solomon Islands were awarded a Post Graduate Certificate in Field epidemiology (official ceremony in 2010).

At the eighth biennial Meeting of Pacific Island Ministers held in Madang in July 2009, it was recognised that PPHSN continued to play an integral role in international collaboration and communication and thus strengthens the region's IHR capabilities. It was also mentioned that PacNet (together with PacNet-restricted) list played a crucial role in the dissemination of updates and guidance and discussion of response options and priorities as the new A(H1N1) pandemic developed.

2010 Meeting for the Pacific IHR National Focal Points and PPHSN-EpiNet Representatives on Syndromic Surveillance for the Pacific was organised

Pacific Syndromic Surveillance System was launched.

16th PPHSN-CB meeting was held prior to the IHR/PPHSN meeting. Pacific Outbreak Manual was developed. PPHSN Infection Prevention and Control Guideline was published.

Regional Workshop LabNet 2010 was organised promoting the 'One Health' approach. 17th meeting of the PPHSN-CB took place at the same of the LabNet Workshop and focussed on training in field epidemiology and the establishment of a regional EpiNet team. Workshop on vector mosquito identification, surveillance and control was organised in Fiji.

2011 Sub-regional workshop 'Strengthening Influenza surveillance networks in the Pacific' was organised.

Assessment of sensitivity and specificity of rapid diagnostic tests and immunofluorescence assay for influenza was conducted.

At the ninth Ministerial Meeting, held in Honiara in June 2011, it was recommended that PPHSN, including the Pacific Syndromic Surveillance System, and other existing coordination and capacitybuilding mechanisms (PHIN and PIHOA) should be fully used to strengthen both in-country and regional surveillance and response.

2012 Meeting on International Health Regulations (IHR), Asia Pacific Strategy for Emerging Diseases (APSED) and the PPHSN was organised.

18th meeting of the PPHSN-CB was held just before the IHR, APSED and PPHSN meeting. In-country and sub-regional training on IATA Dangerous Goods Regulation started including certification and re-certification of laboratory technologists.

Links between Climate Change and Health and PPHSN were discussed. Two editions of Inform'ACTION (#36 and a special edition) were dedicated to Climate Change and Health (published in 2012 and 2013).

2013 DDM training programme was redeveloped by PPHSN partners in response to a call for action from Pacific Ministers of Health.

Pacific Outbreak Manual was revised.

Feasibility study on the development of a regional capacity-building programme was conducted, which shaped the foundations of the Strengthening Health Intervention in the Pacific (SHIP).

5th LabNet Meeting was organised on 'Strengthening Pacific Laboratory Quality Management Systems (LQMS) Toward Accreditation.'

19th PPHSN-CB meeting took place in Noumea and endorsed proposed TORs for the establishment of a regional EpiNet team.

PPHSN representatives joined the 1st International Forum on Public Health Surveillance and Response in island territories and countries in La Reunion.

Response and Analysis for Pacific Infectious Diseases (RAPID) project started.

At the Tenth Pacific Health Ministers Meeting that took place in Apia, Samoa, in July 2013, it was acknowledged that PPHSN serves as a coordinating mechanism to build capacity and provide expertise in outbreak surveillance and response across the Pacific.

2014 Overview of dengue, chikungunya and Zika virus outbreaks in the Pacific was compiled at the end of 2013 with recommendations for surveillance, vector-control and laboratory confirmation and subsequent updates in 2014-2016.
 Map of epidemic and emerging disease alerts in the Pacific was launched.

Delivery of DDM training courses continued: more than 110 health workers from 13 Pacific Island countries and territories commenced participation in the DDM programme.

2015 PPHSN Regional LabNet/EpiNet meeting was organised on 'Capacity building, preparedness and PPHSN Performance Indicators'.

20th PPHSN-CB Meeting was held just after the PPHSN regional meeting. Second Pacific Operational Research Course was conducted in 2015-2016 (12 participants). In-country and sub-regional training on LQMS started. At the Eleventh Pacific Health Ministers Meeting held in Yanuca Island, Fiji, in April 2015, it was recommended to strengthen PPHSN for communicable disease surveillance in order to ensure reliable and timely data on key health indicators.

2016 Response to Zika virus threat: updates and recommendations for surveillance, vector-control and laboratory confirmation shared on PacNet. Pacific Outbreak Manual was revised. Memorandum of Agreement was signed between SPC and FNU for the accreditation of the redeveloped DDM Training Programme. Eight DDM candidates were awarded Post Graduate Certificate in Field Epidemiology. Delivery of DDM training course continued: Over 220 health workers around the Pacific have commenced the DDM programme. PPHSN Infection Prevention and Control Guideline was revised (to be published in 2017). Training workshops on infection control were organised in Tuvalu and Vanuatu. One laboratory technician from Vanuatu was trained in laboratory techniques at IPNC and public health surveillance and response at SPC during two weeks as a result of the poster competition organised during the PPHSN meeting in 2015.

At the Fourth Heads of Health Meeting held in Suva, Fiji, in April 2016, the value of the work of PPHSN in alerting countries to outbreaks was acknowledged. The importance of surveillance in detecting outbreaks, including of previous unknown diseases in the region such as zika and chikungunya, was noted.

2017 Regional PPHSN Meeting 'Celebrating 20 years of Pacific Public Health Surveillance Networking' is organised.

Note: this list of events and activities is not exhaustive. A number of in-country activities have also been carried out in partnership under the PPHSN umbrella (but not always labelled as "PPHSN").

Acknowledgments

Many thanks to all PPHSN members and partners for their labour of love and great contributions to the development of PPHSN services and achievements over the past 20 years:

PPHSN core members - Ministries/Department of Health of the 22 Pacific Island countries and territories:

| American Samoa | Northern Mariana Islands |
|--------------------------------|--------------------------|
| Cook Islands | Palau |
| Federated States of Micronesia | Papua New Guinea |
| Fiji | Pitcairn Islands |
| French Polynesia | Samoa |
| Guam | Solomon Islands |
| Kiribati | Tokelau |
| Marshall Islands | Tonga |
| Nauru | Tuvalu |
| New Caledonia | Vanuatu |
| Niue | Wallis and Futuna |

PPHSN allied members

- U.S. Centers for Disease Control and Prevention (U.S. CDC)
- College of Medicine, Nursing and Health Sciences, Fiji National University
- Communicable Diseases Network Australia/New Zealand (CDNA)
- Hawaii Department of Health
- Hunter New England Local Health District Population Health (HNE)
- Institute of Environmental Science and Research Limited (ESR)
- International Network of Pasteur Institutes and Associate Institutes
- James Cook University (JCU)

- Institut Louis Malardé (ILM), Papeete, Tahiti, French Polynesia
- Micronesian Human Resources Development Center
- National Centre for Epidemiology and Population Health / Australian National University (NCEPH/ANU)
- Fiji Centre for Communicable Disease (Mataika House)
- Pacific Basin Medical Association (PBMA)
- Pacific Health Research Council (PHRC)
- Pasteur Institute of New Caledonia (IPNC)
- Pacific Island Health Officers Association (PIHOA)
- Training Programms in Epidemiology and Public Health Interventions Network (TEPHINET)
- Pacific Community (SPC)
- UNICEF
- Western Pacific HealthNet
- World Health Organization (WHO)

Regional partners

- Lab Plus, New Zealand
- National Serology Reference Laboratory, Melbourne (NRL)
- Pacific Paramedical Training Centre, New Zealand (PPTC)
- Queensland Health Forensic Scientific Services (QHFSS)
- Queensland Mycobacterium Reference Laboratory (QMRL)
- Queensland Medical Laboratories (QML)
- Victoria Infectious Diseases Reference Laboratory (VIDRL)
- WHO Arbovirus Reference Centre (QUT)
- WHO-Collaborating Center for Influenza (WHO-CC)

Funding agencies

- Agence française de développement (AFD)
- Asian Development Bank (ADB)
- Australian Government Department of Foreign Affairs and Trade (DFAT)
- U.S. Centers for Disease Control and Prevention (U.S.CDC)
- Fonds Pacfique / French Pacific Fund
- German Government Kreditanstalt fur Wiederaufbau (KfW)
- New Zealand Ministry of Foreign Affairs and Trade (MFAT)