FAO/OIE Sub-Regional Meeting of Global Framework for Progressive Control of Transboundary Animal Diseases (GF-TADs) for the Pacific Region in collaboration with SPC

25 - 26 June 2009, Nadi, Fiji
Report of the First /FAO/OIE Sub-Regional Meeting of GF-TADs for SPC Region

in collaboration with SPC

Tanoa Hotel


Peter Manuelli

Consultant
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Peter Manueli, Consultant

I would like to thank the Secretariat of the Pacific for giving me the opportunity to participate in the first FAO/OIE Sub-Regional Meeting of GF-TADs for SPC Region held in collaboration with SPC in Nadi, Fiji: from 25-26 June, 2009.

The FAO/OIE GF-TADS programme is a new one for the region and it will no doubt make a significant contribution to the development of the livestock sector in the Pacific Island Region (PIR) by developing capacity to prevent TAD incursions but also through the promotion of good and the development of epidemiological and laboratory networks.

It is fortunate that all of the PHOVAPS members of were present to participate in the meeting and take advantage of the opportunity to interact with the highly qualified resource personnel from the FAO and OIE namely:

- Dr Teruhide Fujita (OIE)
- Dr Itsuo Shimohira (OIE)
- Dr Than Hla (OIE)
- Dr Carolyn Benigno (FAO)
- Dr Subash Morzaria (FAO)

This meeting would not have been so successful without the support, co-ordination and organisation provided by the staff of the SPC Animal Health and Production thematic group and they are to be congratulated on their efforts. In particular thanks are due:

- Animal Health and Production Advisor, Dr Ken Cokanasiga
- Regional Animal Health Specialist, Dr Ian Peebles
- Sub-regional Animal Health Specialist-Melanesia, Dr David Thomson
- Sub-regional Animal Health Specialist-Polynesia, Dr Ilagi Puana
- Paravet Training Officer, Dr Nancy Dalfovo
- Animal Health Laboratory Scientist, Dr Elva Borja
- Animal Production Officer, Mr Nichol Nonga
- Project Assistant, Ms Maria Karalo
- Information Assistant Ms Anju Mangal
- Research Assistant, Ms Merewai Toganivalu
- Graphic Artist, Ms Unaisi Vucago
- PRIPPP Technical Assistant, Mr. Andrew Tukana

The participation of members of other SPC groups must also be recognised, these include:

- PRIPPP Co-ordinator, Ms Jennie Fischer
- Database training co-ordinator, Mr Laurie Fooks
• PRIPPP Pandemic Preparedness & Training Specialist, Dr Narendra Singh

They provided valuable insight into their areas of activity and guidance for the meeting deliberations.

Finally, thanks must be extended to all of the representatives of all of PICTS that participated in the meeting. Their willing and good natured participation in the programme of ensured that the meeting was both productive and enjoyable.
Abbreviations and Acronyms

AAHL  Australian Animal Health Laboratory
AHLS  Animal Health Laboratory Scientist
ADB  Asian Development Bank
AH&P  Animal Health and Production (SPC)
APHCA  Animal Health and Production Commission for Asia and the Pacific
AHS  Animal Health Specialist
AQIS  Australian Quarantine and Inspection Service
ASEAN  Association of South East Asian Nations
ASF  Africa Swine Fever
AusAID  Australian Agency for International Development
BTV  Bluetongue Virus
CDC  Center for Disease Control and Prevention (US)
CMC-AH  Crisis Management Centre for Animal Health
CNMI  Commonwealth of the Northern Mariana Islands
CRGA  Committee of Regional Governments and Administrations
CROP  Committee of Regional Organisations of the Pacific
CSF  Classical Swine Fever
CVO  Chief Veterinary Officer
DAVAR  Direction des Affaires Vétérinaires, Alimentaires & Rurales de Novelle-Calédonie
DAFF  Department of Agriculture, Fisheries and Forestry (Australia)
ECTAD  Emergency Centre for Transboundary Animal Disease
EID  Emerging infectious disease(s)
ELISA  Enzyme linked immunosorbant assay
ERP  emergency response plan
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ERV</td>
<td>Ebola Reston Virus</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>FAO-TCP</td>
<td>Food and Agriculture Organisation Technical Co-operation Programme</td>
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<tr>
<td>FMD</td>
<td>foot-and-mouth disease</td>
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<td>FSM</td>
<td>Federated States of Micronesia</td>
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<tr>
<td>GF-TAD</td>
<td>Global Framework for the progressive control of Transboundary Animal Disease</td>
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<tr>
<td>GIS</td>
<td>geographic information system(s)</td>
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<td>GLEWS</td>
<td>Global Early Warning Systems</td>
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<tr>
<td>H1N1</td>
<td>Haemagglutinin 1 Neuraminidase 1 (the virus that causes H1N1 Influenza), also A/H1N1</td>
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<tr>
<td>H5N1</td>
<td>Haemagglutinin 5 Neuraminidase 1 (the virus that causes HPAI)</td>
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<td>HPAI</td>
<td>highly pathogenic avian influenza</td>
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<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
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<tr>
<td>IBD</td>
<td>Infectious Bursal Disease</td>
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<tr>
<td>IRA</td>
<td>Import Risk Analysis</td>
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<tr>
<td>JCS</td>
<td>joint country strategy</td>
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<td>LRD</td>
<td>Land Resources Division (SPC)</td>
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<tr>
<td>LNC</td>
<td>Service des laboratoires officiels vétérinaires, agroalimentaires et phytosanitaires de la Nouvelle-Calédonie</td>
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<tr>
<td>MAF</td>
<td>Ministry of Agriculture and Forestry (New Zealand)</td>
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<tr>
<td>MPI</td>
<td>Ministry of Primary Industries (Fiji)</td>
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<tr>
<td>MOU</td>
<td>memorandum of understanding</td>
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<td>ND/NCD</td>
<td>Newcastle disease</td>
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<td>NVSL</td>
<td>National Veterinary Services Laboratories (US)</td>
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<td>NZaid</td>
<td>New Zealand Agency for International Development</td>
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<td>OIE</td>
<td>World Animal Health Organisation</td>
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<td>OFFLU</td>
<td>OIE/FAO Flu network</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>OWOH</td>
<td>One World One Health</td>
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<td>PAHIS</td>
<td>Pacific Animal Health Information System</td>
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<td>PAHLNet</td>
<td>Pacific Animal Health Laboratory Network</td>
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<td>PAPITaF</td>
<td>Pacific Pandemic Influenza Taskforce</td>
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<td>PCR</td>
<td>Polymerase Chain Reaction</td>
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<tr>
<td>PHOVAPS</td>
<td>Pacific Heads of Veterinary and Animal Production Services</td>
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<tr>
<td>PICTS</td>
<td>Pacific Island countries and territories</td>
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<td>PIR</td>
<td>Pacific Island Region</td>
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<tr>
<td>PNG</td>
<td>Papua New Guinea</td>
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<td>PPE</td>
<td>personal protective equipment</td>
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<td>PPR</td>
<td>Peste Petit Ruminants</td>
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<td>PPHSN</td>
<td>Pacific public health surveillance network</td>
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<td>PRIPPP</td>
<td>Pacific Regional Influenza Pandemic Preparedness Project</td>
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<td>PVS</td>
<td>Performance vision and strategy (OIE performance tool)</td>
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<td>RAHCs</td>
<td>Regional Animal Health Centres</td>
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<td>RSC</td>
<td>Regional Steering Committee</td>
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<td>RSO</td>
<td>Regional Support Organisation</td>
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<td>RSU</td>
<td>Regional Support Unit</td>
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<td>RVF</td>
<td>Rift Valley Fever</td>
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<tr>
<td>SA</td>
<td>South Asia</td>
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<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Cooperation</td>
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<tr>
<td>SEA</td>
<td>South East Asia</td>
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<tr>
<td>SESER</td>
<td>Service de l’eau, des statistiques et des études rurales</td>
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<tr>
<td>SIVAP</td>
<td>Service d’Inspection Vétérinaire Alimentaire et Phytosanitaire</td>
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<tr>
<td>SOP</td>
<td>standard operating procedure</td>
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Welcome from Mr Engly Ioanis, Chairman, PHOVAPS

As the Chairman of PHOVAPS that it is my pleasure to officially open this first regional meeting of GF-TADs and invite Dr Fujita, Dr Morzaria and Dr Cokanasiga to the front.

I would now like to welcome all members of PHOVAPS especially the SPC staff and resource persons from the FAO and OIE to this meeting and invite Dr Fujita to make the first presentation.

Welcome Address for the Sub-Regional Meeting of GF-TADs for SPC countries in collaboration with SPC Secretariat,
Dr Teruhide, Fujita

Dr Engly Ioanis, Chair of PHOVAPS, Dr Ken Cokanasiga, Adviser to SPC Secretariat; Dr Subhash Morzaria, Regional Manager of FAO ECTAD; Bangkok, Dr Carolyn Benigno, Animal Health Officer, FAO Bangkok; distinguished delegates, distinguished observers, ladies and gentlemen.

It is my great pleasure to welcome all of you to this important FAO/OIE Sub-Regional Meeting of GF-TADs for SPC countries, in collaboration with SPC Secretariat, being held here in Nadi, Fiji and to say a few words, on behalf of the Permanent Secretariat for GF-TADs Regional Steering Committee for Asia and the Pacific and also on behalf of OIE Regional Representation for Asia and the Pacific, based in Tokyo.

Firstly I would like to thank the Secretariat of Pacific Community (SPC) for its support in preparing and arranging for this meeting thank you to Dr Ken Cokanasiga and his colleagues, and thank you also to our
partner of the GF-TADs; namely FAO, represented by Dr Subhash Morzaria and Dr Carolyn Benigno, both from FAO Regional Representation in Bangkok.

As you know well, livestock has played important roles to improve human nutrition and their livelihood, the agricultural and rural development, income generation and food security. Due to the increasing demand of animal protein by consumers of the world, particularly in developing countries, it is expected that the livestock sector will be further developed in future.

However, there are actually some constraints against the livestock development, which include animal diseases, in particular emerging and Transboundary Animal Diseases, including zoonoses which are transmissible from animals to humans.

In this context, it is quite difficult for a single country to tackle transboundary animal diseases, because of their borderless nature, and thus capacity building of veterinary services, international cooperation and regional alliance to fight against such transboundary animal diseases (TADs), are crucial for the successful achievement of actions for that purpose.

Ladies and gentlemen,

The Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs) is a unique collaborative of FAO/OIE initiative, which combines the strengths of both the international organizations.

Organization of this Sub-Regional Meeting for SPC countries was proposed by the previous GF-TADs Regional Steering Committee held in Bangkok, 2007 in order to talk about the current conditions of animal health in member countries and also about the development of TADs control strategies in this Region, taking into account the epidemiological and geographical conditions in the SPC region.
We understand that the general need to improve animal health field services and emergency preparedness here in the SPC region has been well considered and in particular after occurrences of Highly Pathogenic Avian Influenza (HPAI) in Asia and other regions, through the good regional meeting mechanism of PHOVAPS held earlier in the week and at previous PHOVAPS meetings.

We will work closely with SPC and its members for animal health improvement and to contribute to the prevention and control of TADs.

Now, the outcome of our consultation at the Sub-Regional Meeting for two days, here in Nadi, which will include Regional Framework of the Regional Support Unit (RSU), Epidemiological and Laboratory networks, will be reported to the next Regional Steering Committee to be held in Tokyo, Japan, on 24-25 July.

Under these conditions, I do hope this Meeting will be able to discuss effective mechanisms and ways of TADs prevention and control, and that the Meeting will create productive conclusions for future activities.

Thank you for your attention.
Opening Remarks by Dr Subhash Morzaria
Regional Manager of ECTAD, Regional Office for Asia and the Pacific, Bangkok, Thailand

Dear Dr. Engly Ioanis, the Chairman of the Pacific Heads of Veterinary and Animal Production Services (PHOVAPS); Dear Dr. Ken Cokanasiga, Representative of Directorate of the Land Resources Division of the SPC based in Suva; Dear Dr. Fujita, Representative of OIE; Dear CVOs; Directors of livestock services; and other representatives from Pacific Countries; colleagues, ladies and gentlemen

I would like to start by saying a big thank you to the Government of Fiji for hosting this meeting here in such a pleasant, a relaxing environment where we feel very welcome with your very kind and warm hospitality people. This is my first time to Fiji, and I must say that it is really a great real pleasure to be with you today for this meeting of the GF-TADs. I am sure some of you, particularly the CVOs of the FAO and OIE member countries from the Pacific Countries, know about the GF-TADs initiative. For those who are not familiar with the framework I will say a few words about its origin and evolution and what it stands for now.

The GF-TADs initiative started in response to the major FMD crisis in Europe in early 2000. It became quite clear that when the Asian virus encroached the disease free space in Europe with a major epizootic, it was not possible to prevent similar incursions by building walls to protect the Northern Hemisphere. The best way to address this problem was to approach the control by targeting the source of infection. Addressing the problem at source, which is often in poor farming communities where animal health services are not adequate, is a win win situation. It helps poor farmers to keep their animals healthy, and the developed countries are better assured of the disease free status they want to keep. After a number of discussions and brainstorming sessions with a wide range of partners, the first joint FAO/OIE framework emerged that was referred to as the Global Framework for Progressive Control of FMD. This document then quickly evolved into a formal joint FAO/OIE GF-TADs initiative, which was
more generic and addressed all priority TADs globally. This document was formally endorsed in 2004 by both the FAO and OIE member countries.

This Framework has since served and continues to serve as an umbrella to develop a number of activities related to TADs control through consultative processes including organization of conferences and workshops, and development of specific strategies to control targeted diseases for various reasons. The GF-TADs umbrella has also provided the formulation of a number of disease control platforms at the global level. These include Global Early Warning Systems (GLEWS), OIE/FAO Flu network (OFFLU) and the Crisis Management Centre for Animal Health (CMC-AH). At the regional level establishment of Regional Animal Health Centres (also referred to as Regional Support Units) and Regional Epidemiology Centres with Diagnosis and Surveillance networks are being created to support countries implement prevention and control activities with a regional perspective.

The support of Specialized Regional Organizations such as SAARC, ASEAN and SPC in this region is a key to the success of regional approaches to TADs control. For Specialized Regional Organization to be effective institutional capacity and resources need to be developed and generated. FAO and OIE, with the GF TADs initiative, will continue to address TADs using regional approaches the regional organizations as the core of this concept.

A number of regional consultations have been held in SAARC and ASEAN between 2004 and 2006. The initial focus has obviously been in these sub-regions as they are severely burdened by a number of TADs both of significant economic importance and of great public health concern. During these consultations a number of diseases were prioritised for both regions. These included FMD, PPR and HPAI for the SAARC region, and FMD, CSF and HPAI for the ASEAN region. Also a number of cross cutting issues were identified common to all TADs control and included reinforcement of surveillance, diagnosis, reporting and preparedness for an early response to new outbreaks.
Since the establishment of GF-TADs, HPAI has been the major disease the region had to deal with. Numerous projects were put in place and FAO took an important role in supporting the countries to prevent and control the disease at regional and national levels. But a lot remains to be done. The emergence of new diseases, due to globalization of movements and global changes, imposes that surveillance systems, capabilities to understand, predict and be able to respond rapidly have to be strengthened. Control of diseases need to be addressed on a holistic manner including socio-economic dimensions, farming system and market chain information and understanding. Cultural dimensions are also important to consider at the implementation of any prevention and control programme needs a good public-private partnership.

It is also increasingly becoming apparent that more and more of the new emerging diseases are zoonotic. This has been the case with rift valley fever, SARS, Nipah virus, West Nile and many others, without forgetting the devastating H5N1 highly pathogenic avian influenza which killed millions of poultry since 2004, affected trade, production and small holders’ livelihoods, killed people and may still be the origin of a pandemic.

Addressing the virus H5N1 at source was indispensible and this was recognized in 2005, in Geneva after 2 years of an unbalanced approach for human protection strategies. At the Beijing Conference it was decided that the poultry sector should be the object of determinative activities and this has shown to be the right approach. Nevertheless the virus H5N1 still exists in Asia and few countries remain heavily infected despite of major improvements achieved all over the world with more awareness, surveillance and capability to eliminate the infection.

Because many EIDs are zoonotic, the collaboration between the human and animal health sectors has to be developed. This is what was achieved at the international level with establishment of many joint tools and mechanisms and to some extent in several regions, but there is still room for improvement
particularly at the national level. The UN technical agencies (FAO, WHO, UNICEF), the OIE, the interagency coordination UNSIC and World Bank have developed a “One World One Health’ strategy which describes how these intersectional and multidisciplinary approach should be followed. The human health, animal health, ecologist, wildlife specialist and many other experts and officials must collaborate and several intersectoral conferences have already taken place on this one OWOH strategy. This Strategy could not have been more timely given the recent emergence of a new influenza virus, A/H1N1, which is responsible for the present pandemic. Communication and participatory approaches are key elements of tackling such emergencies.

Unlike most of Asia, the Pacific island countries are very fortunate not to have any major infectious disease problems in their livestock. However, in this globalized world incursions can occur quite unexpectedly with unpredictable results. Therefore, the primary objective for this region is to maintain your favourable animal health status so the livestock industry flourishes promoting food security and livelihoods of small holder farming communities. Therefore regional approaches should define clear guidelines for prevention and control of diseases through rapid detection and response before any new disease incursion becomes a problem.

During the two days of meeting we will discuss how to address animal health prevention and control in the SPC region. FAO and its regional teams based in Bangkok are ready to continue and strengthen its support to member countries.

We would like to thank you for your participation in this meeting and I thank the Government of Fiji for hosting this Sub-regional meeting of GF-TADs for SPC Region. I hope we will all work very productively in this very friendly and conducive environment for dialogue. I wish all of us a very friendly and successful meeting.

Thank you.
Opening Comments by Dr Ken Cokanasiga
Animal Health and Production Advisor, SPC

The Chairman of the PHOVAPS forum, Mr Engly Ioanis; colleagues from the OIE Office in Tokyo, Dr Teruhide Fujita and Dr Itsuo Shimohira; colleagues from the FAO in Bangkok, Dr Carolyn Benigno and Dr Subash Morzaria; Colleagues from the PHOVAPS forum, friends.

I would like to join our colleagues from the OIE and FAO on behalf of the executive of the SPC in welcoming you all to this first sub-regional meeting for GF-TADS in the SPC region. The SPC is extremely pleased to be a collaborator in this GF-TADS initiative for our region.

In a region that encompasses about 180 million square kilometers which is about a third of the earths surface area, that includes about 25,000 islands with a total population of just under 9 million people, the challenge to maintain and environment that is free of TADS is immense. The large area with its vast borders in themselves offer a huge challenge in trying to police and monitor incursions of TADS.

In a region made up of 22 developing countries, most of whom are categorised as small island developing states or and least developed countries, the resources available to maintain our daily socio-economic needs is often stretched to the limit in normal times.

This leaves the majority of our population extremely vulnerable to natural disasters such as tsunamis volcanic eruptions hurricanes and floods. In the past when these disasters have occurred in our region it has been these very populations that have been affected, they do not have any ability to mitigate such situations and face extreme difficulties in recovering from such disasters.

The agricultural sector is often touted as the backbone of the economy of most of our member countries. The livestock sector is an important component of agriculture, providing much needed export revenue for the larger countries, providing vital protein sources for our rural communities, contributing
to our food security needs and especially in the Pacific region it plays an important role in our traditions and cultures.

Compared to other regions of the world, our region is relatively free of serious pest and diseases affecting livestock. It is therefore vitally important that this status is maintained.

The PRIPP project funded by both the Australia and New Zealand governments aimed at addressing possible incursions of HPAI is a project which is not only timely but has identified gaps in our preparedness and response capacities and had commenced programmes, directed at addressing these gaps in our preparedness and response and systems and for HPAI and other GF-TADS in the region. However a lot still needs to be done in the region. This GF-TADS initiative by FAO and OIE is therefore timely to build upon the work commenced by the PRIPP project.

I certainly hope that programmes and activities can be agreed upon for the region to further prepare ourselves for such incursions and build necessary capacities both nationally and regionally, to be able to appropriately respond to incursions of transboundary animal diseases.

My colleagues and I from SPC look forward to the discussions over the next two days and hope that we can reach agreements on future programmes to further support the livestock sector for the countries and territories for the region. My colleagues and I look forward to the discussions over the next two days and hope that we can reach agreement on future programmes to further support the livestock sectors in the region.

SPC is grateful for being appointed as the Regional Support Organisation for GF-TADS, and our AH&P team as the Regional Support Unit for GF-TADS in the region. I would like to thank the OIE and FAO on the behalf of the SPC and our members for initiating this initiative for the Pacific region.

Thank you
Meeting Conclusions and Recommendations

The FAO/OIE Sub-Regional Meeting of GF-TADs for SPC Region in collaboration with SPC Secretariat held in Nadi, Fiji on 25-26 June 2009, recommended the following to support activities of animal disease prevention and control in the Secretariat for Pacific Community (SPC) region, particularly in conjunction with the Global Framework for progressive control of Transboundary Animal Diseases (GF-TADs).

The following conclusions and recommendations were derived from the above meeting.

1. The member countries of the Pacific Region have agreed that Regional Support Unit (RSU) under the umbrella of GF-TADs for the Pacific region will be hosted by the Secretariat for Pacific Countries (SPC). The RSU will be based in Suva, Fiji and attached to the animal production and health team. It has also been agreed by the member nations that the Epidemiological Unit will be attached to the RSU in Suva and will have links with national focal points as well as to the epidemiological expertise in Australia, France, New Zealand and USA.

2. For the RSU to function efficiently, it is also recommended that it be strengthened, and training for the regional staff attached to the Unit be provided so they are able to manage regional coordination to support rapid responses to emerging disease problems and also develop and deliver training programmes of the region in various aspects of TADs control.

3. Based on the predominant livestock species in the 22 member countries, and almost no major problems with important transboundary animal diseases (TADs), the member countries have agreed to base their GF-TADs priority on disease prevention through early detection and response capabilities. In this regard the countries have identified the following two broad priorities:
   a. Consolidating their preparedness plans for exotic diseases such as Highly Pathogenic Avian Influenza (HPAI), Newcastle Disease, Classical Swine Fever, Foot and Mouth Disease, Bluetongue, Peste des Petits Ruminants and Rabies.
b. Continuing to address their immediate endemic zoonotic disease problems such as Brucellosis, Leptospirosis and Bovine Tuberculosis in ruminants.

4. Regional Coordination will be one of the most important functions of the RSU and in this regard it should play a major role in:
   a. regional harmonization of various aspects of disease control including standardization of legislation and its application, and
   b. resource mobilisation for the priority areas identified below.

5. SPC has identified three Sub-Regional laboratories to be based in Guam, Fiji and, Papua New Guinea. These are level 2 laboratories that will serve the three Pacific Island subregions; Melanesia, Micronesia and Polynesia. Level 2 laboratories are defined as easily accessible to other Pacific Islands Countries and Territories (PICTs), have an appropriately established infrastructure to house serology equipment, have permanently employed, well trained laboratory veterinarians and technicians and countries hosting the laboratories can give duty tax exemption for imported laboratory equipment. These laboratories are currently focused on conducting serological tests for avian influenza, but will soon upgraded to conduct PCR-based diagnostics. These laboratories are also expected to provide other diagnostic services, particularly for potential important exotic diseases (see above). The member nations recommend that the strengthening of these sub-regional laboratories is a priority in order to provide rapid regional diagnostic capacity, particularly as most of the countries in the region have inadequate national diagnostic capabilities.

6. The Pacific countries have agreed that given the current state of national and regional diagnostic capacity it is not realistic to consider building facilities that could provide regional reference level diagnostic facility. Thus the SPC members will continue to access services of the external Reference Laboratories through Australia, France, New Zealand and USA.

7. It was acknowledged that in the medium to long term national laboratory capacities will need to be built up to support surveillance programmes that will enable the countries and the region to
detect infectious diseases early, and respond to them in a timely manner. In recommending enhancement of laboratory capacities in various countries of the Region the following important points need to be taken into consideration:

a. Laboratory capacity is still rudimentary in the region and majority of the countries do not even have basic national laboratory facilities.
b. In most countries the human health diagnostic capacity is at a higher level than veterinary laboratories, however currently, veterinary samples are not allowed to be tested in human laboratories.
c. The key areas for strengthening laboratory capacity include renovating existing rundown laboratory buildings or constructing completely new buildings, and procuring new laboratory equipment.
d. Multiple laboratory techniques should be progressively strengthened; starting with basic laboratory facilities to microscopy, serology and in some countries molecular diagnostics.
e. Standard Operating Procedures (SOPs) for collection and shipping of samples and diagnosis need also to be developed for most countries.

8. The SPC also agreed that all countries should strengthen their surveillance capacity and develop programmes focusing on the two main activities below:
   a. Conducting baseline disease surveillance to better define the existing disease status in the countries.
   b. Generating national and regional information on livestock sector (range of species, numbers, farming systems, etc), and their socio-economic relevance and importance.

9. The participants also strongly recommended training in a broad range of areas for infectious disease prevention and control. These included:

   a. Training of paravets, and institutionalization where possible. The training should include development of advanced para-vet modules and web-based training courses starting
with introductory level training, and gradually moving into more specialised training to make diagnosis of exotic or unusual diseases possible.

b. Training should also be provided to build a strong cadre of laboratory technicians who should be able to make diagnosis of exotic diseases.

c. Field epidemiology training is also necessary in all countries of the Region.

d. Biosecurity training for quarantine officers

e. Communications training (for public awareness, risk communication and crisis communication, etc.) should also be included as part of the capacity building.

f. Good livestock production practices (including on farm biosecurity) and animal welfare

10. Policy and legislation should be strengthened particularly in the areas of compensation, border control (biosecurity), intersectoral coordination, emergency management and vaccination.

11. It is also recommended that for effective and efficient delivery of the above recommendations a monitoring and evaluation system of the GF-TADs regional programme be carried out every for 2 years.

**FAO/OIE GF-TADs Sub-Regional Meeting for SPC countries, in collaboration with SPC**

Dr Teruhide Fujita

GF-TAD stands for the Global framework for the progressive control of transboundary animal diseases, it is a joint OIE FAO initiative which combines the strength of both organisations to achieve common objectives. The GF-TAD programme provides a mechanism to empower regional alliances in the fight against TADS by providing capacity building and assisting with establishing programmes for the specific control of certain TADS based on the regional priorities.

In the Asia-Pacific region GF-TAD activities are implemented under the guidance of the Regional Steering Committee based in the OIE office in Tokyo. The first Regional steering committee meeting was held in Tokyo in March 2005 and the second was held in Bangkok 2007 and the third is planned for next month in Tokyo. The role of the RSC is to ensure regional co-ordination of activities within sub regions and the
monitoring and evaluation of disease eradication and control methods. The RSC will also, foster a spirit of co-operation provides strategic direction to the RSU and RSO to promote the eradication and control of specific TADS in the region. Membership of the RSC comprises selected CVOs from member countries including the chair of FAO/APHCA and the President of the OIE Commission for Asia the Far East and the Pacific. Representatives from FAO, OIE and the WHO are very active participants in the meeting. Three regional organisations ASEAN (SE Asia), SAARC (S Asia) and SPC (Pacific) and the chair of the ASWGL (ASEAN Sectoral Working Group for livestock) also participate in the RSC along with a number of donor (AusAID, USAID, ADB, World Bank, EU, JICA etc), and private sector representatives.

The permanent secretariat of the RSC has the role of organising activities of the RSC such as regional meetings participation in the meetings of the RSU, make information from RSU meetings available and providing advice to the RSC.

To implement activities the GF-TAD RSC works with Regional Support Organisations (RSO) to establish sub-regional support units (RSU) with a cadre of epidemiological units in the RSO. The role of the RSU is to support the implementation of regional and national programmes for the control and eradication of TADS through the establishment of relevant epidemiological and laboratory support/networks and support the implementation of subregional activities.

To date a functional RSU has been established in the ASEAN secretariat and laboratory diagnostic capacity has been developed in a number of ASEAN countries. A functional RSU has also been developed in Kathmandu for the SAARC region with diagnostic capacity in a number of neighbouring countries. The SPC has been recognised as the appropriate organisation in the Pacific region to host a RSU for the Pacific island region in its Animal Health and Production office in Suva.

This meeting of the Pacific RSU is to review and discuss current activities for the prevention and control of TADS for the Pacific island region. Based on these discussions we will consider the way forward and develop short, medium and long term strategies, set up the node of the GF-TAD for the SPC region. We will also make institutional arrangements for the implementation which include confirmation of the location of the RSU in the SPC, development of laboratory and epidemiological networking in the region.
OIE and FAO complementarities in the control and prevention of TAD
Dr Subash Mozaria, FAO ECTAD

This presentation was prepared to give you some sort of an idea of the complementarities between the FAO and OIE in the prevention and control of TAD and then give you a few examples of collaborative activities that we have undertaken the last 5 years.

There are a number of key activities for the control of TADs that the FAO and OIE are involved in around the world and there are significant areas of complementarity of activities for example in the area standards setting, good farmer practises guidelines and strategies. In other areas there are significant overlaps in activities between the FAO and OIE. As mentioned earlier by Dr Fujita said the OIE FAO GF-TAD programme was created specifically to use these complementarities and form an alliance that would be much more productive for the control of TADs than they would be working on their own.

I will try to quickly discuss recent areas where the OIE and FAO have collaborated in the control of TADs such as HPAI, Rinderpest, FMD, RVF, PPR, ASF, Ebola and a few others.

In the case of HPAI we have found a decline in the HPAI problem over the last 5 years. From year to year there is a bimodal appearance of disease, it appears in winter starting in November rising to a peak in February or March and then declining. It is also apparent that the peaks of disease occurrence are declining year after year. In a recent analysis of HPAI we have found a rise in the occurrence of HPAI particularly in West Bengal and Nepal. So we now look at HPAI as a regional problem mainly in the greater Gangetic Plain, the greater Mekong subregion in South East Asia, Indonesia and Egypt, it appears that ducks are a major source of infection. The problem of HPAI has resulted in a number of consultations/meetings on HPAI that have been very useful in mobilizing resources for control programmes. The collaboration between FAO and OIE has resulted in the production of a number of strategic documents relating to HPAI control.

In the case of Rinderpest, it has almost been eradicated with a little pocket of infection remaining in the Southern Sudan area by 2005. The FAO and OIE have helped a number of countries move towards the declaration of freedom in the move towards the global target of eradication by 2010.

In the case of FMD, a new watershed approach has been developed for the control and eradication of FMD under the umbrella of GF-Tads. This approach is based on the concept that there are 6 or 7 watersheds/pools of FMD with distinct virus strains which require a specific control approach with
vaccination. The idea is to progressively control the disease and ensure that there are no jumps of viruses from one pool to another with a view to declaring official freedom with vaccination.

We are beginning to understand the risks associated with Rift Valley Fever (RVF), this is a zoonotic disease. We have seen that in East Africa significant outbreaks have occurred in areas where smallholder sheep farming has become established (to provide food security). This shows that the infectious disease situation is changing dynamically driven by a large number of factors that includes significant changes in rainfall that has boosted vector numbers.

Pest Petite Ruminants (PPR) was until 1972 was confined in West Africa and has recently spread through East into South Asia. PPR is a severe disease of goats and is a prime target for GF Tads control activities based on the use of vaccines.

African Swine Fever (ASF) is a killer disease of swine and there are no vaccines currently available. The disease has recently spread into Eastern Europe, Russia and Central Asia and poses a threat to the pig industries of South Asia and China.

Highly Pathogenic Porcine Reproductive and Respiratory Syndrome (PPRS) which has reported in China, Vietnam, Cambodia, Laos and the Philippines, FAO and the OIE are working together to prevent the spread of PRRS into SE Asian region.

Ebola Reston Virus (ERV) does not cause disease in human but was recently detected in pigs in the Philippines. This disease is maintained in fruit bats from where it is transferred to pigs and humans the virus has been investigated by a multidisciplinary team from OIE FAO WHO and CDC. A plan has since been developed for the identification, detection, surveillance and eventually prevention of infection in the Philippines.

More recently control options for Brucellosis in sheep and goats are being studied for the development of a worldwide control programme based on the models used in Western Europe.

Most recently there is the A/H1N1 virus, it is commendable to see the OIE FAO and World Bank working together to look at how to tackle A/H1N1. Elements of this novel virus have been present in pig populations for the past 10 years and the virus was circulating for 6-7 months before it was detected. This illustrates the importance of active surveillance for viruses rather than just disease in farming systems. Recent infectivity tests carried out in the UK, US and Canada indicate that the virus causes only transient infection in pigs that shed virus for 4-5 days then recover.
The One World One Health (OWOH) framework is being adopted to deal with emerging infectious diseases by the WHO, UNICEF, FAO, OIE and World Bank. The OOWH strategy is increasingly being adopted to address pathogen jumps between animals and humans through the adoption of a holistic approach encompassing interfaces of the human, ecosystem and animal health domains and proposes an interdisciplinary cross-sectoral approach to disease emergence and control.

Over the past 5 years the OIE and FAO have developed a number of platforms that are important mechanisms to address animal health problems globally. The FAO and OIE continue to work closely in RSU’s in Africa and OIE and APHCA disease control commission.

The next steps in the implementation of the OIE and FAO collaboration in the GF-Tads process are:

- Reinforcement of the GF-Tads framework (2nd evaluation)
- Update of the Chart of competencies and synergies between the FAO and OIE
- Reinforcement of the Global Tools (GLEWS, OFFLU, CMC-AH)
- Reinforcement of the Regional Tools: Networks, RAHCs
- Development and implementation of OOWH, with joint areas of actions:
  - VS Strengthening, on the basis of the PVS – Gap Analysis process
  - Biosecurity
- Development and implementation of vertical strategies for
  - Global Rinderpest Eradication Declaration
  - FMD Control Eradication Global Strategy
  - PPR Eradication Program
  - RVF Prevention tools and programmes
The progress of activities in the Asia Pacific region on GF Tads

Dr Carolyn Benigno, FAO

You will note that there are no specific activities for the SPC region in this report however, PNG and Samoa are members of APHCA and send members to participate in APHCA programmes and activities. I hope that by the end of tomorrow we will have some directions from this meeting on activities that need to be carried out in this region.

Between 2003 and 2004 a number of consultations were conducted that have focussed on:

- Identification of the priority transboundary animal diseases in South Asia (SA) and Southeast Asia (SEA)
- Determining priority policy and technical issues to be strengthened in SA and SEA
- Development of proposals for funding for both the SAARC and ASEAN member countries to support TADs control
- Funding for joint activities under the umbrella of GF-TADs has been obtained from FAO TCP facility, FAO-APHCA, the ADB and the EC

These meetings have resulted in the identification of the priority animal diseases for South and South East Asia:

- South Asia: FMD, PPR, HPAI
- Southeast Asia: FMD, CSF, HPAI

Priority policy and technical issues that were identified as needing to be strengthened in South and South East Asia were surveillance, laboratory capacity, preparedness and response, good livestock production practices, socio-economics, communication and communication.

Surveillance activities includes grassroots based surveillance, as well as risk based surveillance with limited resources, the use of risk analysis for trade and disease control, the use of the TADINFO animal health information system, the application of GIS to animal health and production systems and the establishment of epidemiology networks.

Extensive upgrading of laboratories in a number of countries, this has been associated with the provision of training for laboratory staff, the establishment of laboratory networks and the provision of training in the areas of Brucellosis and BSE and other prion diseases has been carried out.
Training in emergency preparedness and response training has been conducted for veterinarians, there have been opportunities to take advantage of preparedness and response training activities carried out in relation to HPAI, FMD, CSF, PRRS, ERV control programmes.

Good livestock production practices, have been focussed on biosecurity measures for animal production systems, animal identification systems for livestock traceability, and food safety issues which include abattoir design and operations, capacity building, consumer awareness, legislation and coordination.

Socio-economic activities carried out have included value chain analysis, the development of compensation schemes, legislation to support animal health measures, and livelihood studies.

Both the FAO and OIE have conducted workshops on communications looking at risk and crisis communications. Knowledge attitude and practice surveys among farmers are carried out to help communication officers design communication materials. Behavioral change communication is required to change farmer behavior in relation to certain high risk production systems.

Regional co-operation, is achieved through networks and the development of MOUs between members of RSO’s.
HPAI control in Asia by the OIE Asia Pacific

Dr Itsuo Shimohira

The first outbreak of HPAI in the Asian region occurred in 2003 but the disease is resurgent with outbreaks continually being reported since then with the most recent one occurring in 2009. The disease has a large negative impact on livestock production and poses a major risk to the health of humans and animal other non avian species.

In an attempt to address the control of HPAI in Asia, the OIE have implemented a series of Japan funded OIE projects in the Asian region. The first project “HPAI control in SE Asia” targeted:

- Improved national and regional HPAI control strategies through the provision of advice on control strategies and the formulation of national contingency plans.
- Encouraged HPAI information sharing to further strengthen the regional early warning system by carrying out workshops on the epidemiology and control of HPAI.
- Strengthening diagnostic capacity of national laboratories and regional collaborative laboratories through the provision of training in the diagnosis of HPAI, making improvements in the diagnostic capability through the provision of diagnostic equipment such as real time PCR.
- Improving surveillance by field veterinarians and para-professionals through the provision of appropriate training.

A subsequent project “Project for strengthening HPAI control in Asia” was implemented with the goals of:

- Strengthening information networking in Asia
- Strengthening the capacity of veterinary services through the evaluation of services and provision of capacity building in including the strengthening of legislation where required.
- The surveillance of wild birds and domestic animals along migratory flyways and the strengthening of the OIE reference laboratory.
- Building HPAI laboratory diagnosis and surveillance capacity through the provision of training in advanced diagnostic technologies for HPAI
- The procurement of laboratory equipment and materials to support the capacity of laboratories to implement advanced diagnostic technologies.
A Brief on the Secretariat of the Pacific Community

Dr Ken Cokanasiga

For those of you who are not familiar with the operations of the SPC I would like to provide a brief description of the organization.

The Pacific is the world’s largest body of water encompassing a third of the Earth’s surface with an area of 179.7 million sq km. The Pacific Island Region (PIR) contains about 25,000 islands that are home to around 9 million people. Many of the Pacific Island communities are extremely vulnerable to natural disasters and are expected to be severely affected by climate change which is expected to result in a 15% projected increase in the intensity of tropical cyclones and accelerated sea rise which will force many people to abandon their homes.

Membership of the SPC is made up of the 22 PICTS in the region (American Samoa, Cook Islands, Federated States of Micronesia (FSM), Fiji Islands, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands (CNMI), Palau, Papua New Guinea (PNG), Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna) plus the remaining 4 founding countries (Australia, France, New Zealand, the United States of America) that are also known as the metropolitan member countries.

SPC has served the people of the Pacific for more than six decades and has grown to become the largest developmental organisation in the Pacific with around 350 staff and offices in Noumea, New Caledonia, Suva, Fiji Islands, and FSM PNG and the Solomon Islands.

The SPC vision for the region is that of “a secure and prosperous Pacific Community”, whose people are healthy and manage their resources in an economically, environmentally and socially sustainable way. To assist the attainment of the vision the SPC Land Resources Division (LRD) provides to its members:

- professional, scientific and research support,
- planning and management capability building.

For funding of programmes and activities the SPC relies on funding from a number of donors that include the metropolitan member countries, other assistance is received from international agencies such as FAO and ADAP.

The SPC activities are governed by the Committee Regional Governmental Administrations (CRGA) which meets annually and the SPC Conference which meets every 2 years.

PHOVAPS is the priority setting body for the work of the SPC Animal Health and Production group and meets every 2 years to provide direction in the formulation of our work programmes.
Discussion of presentations day 1

Comment: Dr Ken Cokanasiga, SPC

Thank you very much for those presentations on programmes and achievements on GF-TADS for the Asian region, these presentations will help to guide us in our deliberations of activities that may be relevant for our region in our discussions during the week.

I am greatly encouraged by the comments by Dr Benigno about the programme looking at good production practices often we focus ourselves on animal health issues without paying sufficient attention to the production systems that the health interventions are aimed at.

Question: Dr Ignacio DelaCruz, CNMI

I have some questions in regards to ERV, is it confined to the Philippines, does it have any public health significance and why is it receiving so much attention from the OIE and FAO?

Answer: Dr Carolyn Benigno, FAO

ERV is usually only found in monkeys but for the first time it has also been detected in pigs accidently samples were sent for PRRS when they tested the samples for other diseases they were found to be positive to ERV. ERV is actually found only in the Philippines but was named Reston because it was first isolated in Reston, Virginia in monkeys which came from Philippines.

It is of public health significance because there are individuals that have antibodies but they are not exhibiting any signs of disease but it is a concern for the human health sector. These individuals were detected in January a few months later they tested a some more people and still found positive individuals so that is the concern ERV is not showing symptoms in humans or pigs but it is a food safety concern. Studies still into ERV in the Philippines are still progressing.

Question: Dr Ignacio DelaCruz, CNMI

One of your slides indicated a role of fruit bats in the spread of ERV, what is the role of the fruit bat in the epidemiology of ERV?
Answer: Dr Carolyn Benigno, FAO

In some of the other Ebola types bats are reservoirs for the virus. This is a hypothesis in Philippines because there are a lot of fruit bats around that infected farm. The CDC have recently collected bat samples from the farm and still waiting for results from these bats.

Question: Mr Otenili Pifeleti, Tonga

From the presentation by Dr Shimohira it is appears that there was a lot of training carried out in relation to the HPAI in Asia. What are the chances of carrying out the same training here in the Pacific?

Answer: Dr Itsuo Shimohira, OIE

As the HPAI outbreak occurred in Asia it was important to improve the diagnostic capability in that area, and that is why Japan decided to fund the project. So far in this program there is no plan to implement training programmes in the Pacific but maybe this is something that could be considered in the future in other projects.

Comment: Dr Subash Morazia, FAO

Could I just add a couple of points to this response, I think that you are asking a very important and valid question, and I think that the GF-TAD process for determining priorities in the region would be a very good basis on which to approach the donors to secure funding. Most of the other countries in the Asian region have already determined their priorities and use these as a basis on which to approach donors.

Comment: Dr Teruhide Fujita, OIE

As Dr Shimohira mentioned, we tend to put more emphasis on how to diagnose accurately and how to respond at early stages of outbreaks. Because of the occurrence of HPAI in SE Asia that is why we have implemented these activities there. At the same time, because the disease has spread to South Asia now we are in the second phase, at the same time South Asia have developed are regional strategic plan for the prevention and control of HPAI that is very helpful when seeking assistance from donors.
Question: Dr Carolyn Benigno, FAO

Ken, a question for your presentation, where does PHOVAPS come in and how do you link to governments and administrations in the region?

Answer: Dr Ken Cokanasiga, SPC

The SPC AHP group comes under Land Resources Division. The AHP work program is governed by PHOVAPS, which prioritizes and develops the AHP work program. As the members of PHOVAPS are the heads of veterinary and animal production services in the SPC region they ensure that SPC activities are aligned with their national activities and priorities.

Comment: Jennie Fischer, SPC

I would like to add that each of the division of SPC have a similar system as well as technical bodies which do the actual work and identify the priorities there is a mechanism for and reporting back to the member countries through the committee of regional governments and administrations (CRGA) which is the governing body of SPC.

The SPC also works directly with member countries through the Joint country strategies that allow us to work directly with ministries and government agencies to facilitate the implementation of SPC programmes and activities.

Question Dr Nime Kapo, PNG

A comment first then a question. I would like to take this opportunity to thank the FAO and OIE for sending their officers to the region and thank the SPC for getting the MOU in place and offer my congratulations to the 3 organizations.

For a country like PNG stuck between Asia and the Pacific, would it be possible for us to be members of both the Asian and Pacific regions?

Answer: Dr Teruhide Fujita, OIE

The SPC region is made up of 22 member countries however OIE membership is very limited. OIE membership is much greater in SE Asia and South Asia so that is where we have been implementing the majority of our activities. At this point we would like to see more countries in the Pacific become OIE members.
Comment: Dr Subash Morzaria, FAO

I think the question is if PNG will benefit from being member of 2 regional organizations. This is something to be decided at the ASEAN level for PNG. In the context of PNG attending GF-TAD meetings in the ASEAN region it may be possible for PNG to attend these meetings as observers as you are not members of ASEAN.

We have a situation in SE Asia and South Asia where Myanmar attends both meeting when it is in fact a member of ASEAN and not SAARC. Also in regards to disease risk, PNG is nearer to SE Asia and has similar disease risks.

Response: Dr Nime Kapo, FAO

Just in response to those comments, PNG is a member of APHCA, FAO and is possibly a member of ASEAN too.

Response: Dr Ken Cokanasiga, SPC

Thank you, this is a possibility that it can be discussed with ASEAN.

Response: Dr Carolyn Benigno, FAO

PNG is a member of APHCA, perhaps during the annual sessions when the work plan for APHCA is discussed PNG can request funding to attend the ASEAN regional meeting.

Comment: Tiatia Tevita, Samoa

I have a suggestion for FAO about APHCA. I would like to appeal to the FAO to add the letter P to APHCA to add the word Pacific and change the name to APHCAP so that all countries can be considered members.
Summary country presentation: Fiji
Dr Robin Achari

Fiji has been free of clinical signs of the prioritised TADS; HPAI, BSE, IBD, CSF, NCD and BTV for the past 3 years, nor have surveillance activities shown any positive results to the listed diseases. At present the capacity of the veterinary pathology laboratory to diagnose the prioritised TAD is limited and samples are shipped to laboratories in Australia for confirmatory tests.

Currently the veterinary pathology laboratory has the capacity to carry out surveillance work for priority TADs along with its current surveillance activities. Plans are in place to expand the diagnostic capacity of the laboratory however this will require significant upgrading of equipment and the provision of training for laboratory technicians. Attempts are in place to develop networks with other national and regional laboratories with the assistance of the SPC.

Currently disease reporting is done from the locality livestock officers through their divisional heads to the Principal Veterinary Officer (PVO). The PVO reports to the Director, Animal Health and Production who is the national OIE delegate.

Current policy for the control of the prioritised TADs is based on stamping out following any exotic disease introduction, assistance from the SPC and others in the region. The needs for the improvement of TAD control in Fiji include:

- Need more veterinarians
- Surveillance and field epidemiology training
- Laboratory Technicians Training
- Networking of Laboratories
- Animal health information and communication systems

Question: Mr Itaia Lausaveve, Tuvalu

How did Fiji become a member of the OIE?

Answer: Dr Robin Achari, Fiji

We wrote to the minister proposing the membership and we allocate around 45000 FJD for the membership
Comment: Mr Itaia Lausaveve, Tuvalu

In the past we have discussed the issue of OIE membership but the issue of the membership fee have been a constraint to joining.

Comment: Dr Teruhide Fujita, OIE

There are several categories of membership available (categories 1-6) each with different membership fees. When countries apply to become members they are assessed and placed in the appropriate category.

Question: Dr David Thomson, SPC

You mentioned that you have some surveillance capacity in your system. What kind of surveillance, passive or active surveillance?

Answer Dr Robin Achari, Fiji

We rely on farmers for passive surveillance. Commodity specialist officers train farmers in recognising signs of disease and farmers report sick animals when to livestock officers when they visit the farms.

At the same time we actively collect and test samples for laboratory diagnosis for example Bovine Viral Diarrhoea and we also plan to start Leptospirosis surveillance again, though most of our work is done on poultry.

We also carry out active surveillance for bee diseases. But the type of surveillance that we carry out depends on the reports of disease that we receive.

Question: Dr Subash Morzaria, FAO

Just coming back to surveillance, you have passive surveillance dependent on information from farmers, (a) are farmers provided training to report on the diseases (b) what particular diseases (c) what is the range of farming systems, intensive...

Answer: Dr Robin Achari, Fiji

Commodity specialist officers train farmers in recognising signs of disease and farmers report sick animals when to livestock officers when they visit the farms.
At the same time we actively collect and test samples for laboratory diagnosis for example Bovine Viral Diarrhoea and we also plan to start Leptospirosis surveillance again. Most of our surveillance work is done on poultry in commercial farms.

We have a range of farming system from big commercial farms, medium level farmers, and small holder farmers

**Bovine Babesiosis in New Caledonia**

Dr Stephanie Martin

The first clinical signs appeared in March 2008 on a Charolais bull, presenting signs were hyperthermia, weakness, inappetence, head oedema, haemoglobinuria, nervous symptoms (aggressiveness) and finally death.

The vet suspected bovine babesiosis but NC was free of the disease at the time. This suspicion was reinforced at the lab with the visualisation of babesia shapes on Giemsa stained blood smears. The role of the last importation of live cattle (in November 2007) was quickly suspected as the dead bull was in contact with one of the imported animals.

This suspicion was confirmed when it was discovered that the animals were accidentally vaccinated before departure with trivalent tickfever vaccine (a live attenuated vaccine which contains strains of *Babesia bovis, Babesia bigemina* and *Anaplasma centrale*). The *Babesia bovis* strain was reactivated by passing through ticks and our naive cattle caught the disease and developed clinical signs (until death). The main problem was that by the time the disease was discovered the pasture was full of contaminated ticks which were transmitting the disease to others animals.

A total of 43 animals were imported and dispersed to 17 different farms, animals from 5 more neighbouring farms also had contacts with the imported animals. These 22 farms carrying around 5000 animals were distributed in 6 municipalities in the south of New Caledonia and 1 in the north. Of these 22 farms only 5 had animals presenting clinical signs.

The official veterinary laboratory of New Caledonia employs about 25 persons working in the 5 units that have been involved in the management of this outbreak: serology, autopsy, histology, haematology and PCR. At the beginning of the outbreak the only diagnostic technique available was the visualisation of Babesia on giemsa stained blood smear and encephalon smear. Since then the LNC has adopted an
ELISA method for the detection of Babesia bovis with the help of Tick Fever center. In addition to this the LNC has worked on 3 PCR methods:

- Classical PCR used at TFC
- Real time PCR “taqman”
- Real time PCR “Buling” (Syber green) : the most used

Disease reporting and surveillance.

The notification to OIE was made at the end of March as soon as the tick fever outbreak was confirmed by French and Australian laboratories. By this stage animals on 4 farms presented clinical signs. Follow up reports were sent to the OIE at each phase of the eradication strategy.

The composition of the operational team was:

- DAVAR/SIVAP/Animal health department : 7 persons including the team’s manager
- DAVAR/LNC : about 4 persons
- DAVAR/SESER : 1 person (map)
- Agriculture sector (breeders representative) : 4 persons
- Local veterinarians of the farmers concerned : 8
- IAC : 1 vet (tick specialist) – 1 technician
- Australian veterinarians 2 to 5 who assisted with choice of the strategy, help for interpretation of the results, bleeding, treatment, etc
- For each intervention on farms the working team was composed of at least 4 persons and the farm’s staff

In selecting the appropriate control strategy the following criteria were taken into account:

- Tick Boophilus microplus is widespread in New Caledonia (since second war)
- But NC was free of tick born diseases (including tick fever)
- Cattle population highly susceptible to ticks (Charolais, Limousin) and to the disease
- Evaluated cost of the disease was very high
- Only a few months have passed since the cattle importation at the origin of the outbreak
- Imported animals were distributed in a limited number of farms
- They were all young animals of high value : kept under control
- The laboratory was rapidly able to do ELISA test

Based on all these criteria the New Caledonian government decided to try to eradicate the disease with the help of the Australian government through a programme of treatment and tick control.

The following zoning was adopted:

- **Zone 1:** Infected zone (imported animals and animals and pasture in contact with them). About 1500 animals. Containment zone - quarantine.
- **Zone 2:** Suspect zone (same farms or neighbours, animals separated to infected animals by fences). About 3000 animals. Containment zone - quarantine.
- **Zone 3:** buffer zone (all farms next to zones 1-2 but separated by an important barrier). 65 farms, >4800 animals. Under surveillance.

The work on the farms in zone 1-2 consisted of:

- Identification of all the animals concerned
- Treatment : Imidocarb dipropionate (Imidox - Imizol®) 3 mg/kg by subcutaneous injection 2 to 3 times, 1 month apart
- Blood samples for ELISA and PCR taken 4 times 2 months apart.
- Tick control : dip/spray of amitraz 12.5% twice a month (less than 20 days apart) – Ivermectin injection or fluazuron applications (pour on) on farms with amitraz resistant ticks
- Slaughter of animals still positive in April 2009 + wild cattle

The Government enacted 7 decrees which: list the farms concerned, define the confinement and specific measures to be taken on each farm and define the specific measures for the property with wild animal.

The communication with all the farmers was very important and involved:

- Meetings with farmers in each municipality to explain the causes, and control strategy
- meeting with the farmers concerned about the constraint, the work to do, the indemnity
- communication on TV, radio, newspaper
- frequent contact of farmers with the “work team” and the vets

New Caledonian government has worked at each stage with the Australian Government and they are still working together. Collaboration was essential for the choice of the strategy, the development of the diagnostic method, for the help on the field.

What’s the result of this work today?

- Only 2 farms and the property with wild animals are still in zone 1
- 1 farm is still in zone 3
- Number of ticks on pasture has dropped thanks to the intensive tick control
- Very few animals died of the disease (23)
- The disease didn’t spread out of the 22 farms concerned

Question: Dr Ignacio DelaCruz, CNMI

Although you did not state it, I assume that the infected cattle came from Australia?

Answer: Dr Stephanie Martin, New Caledonia

Yes they did

Question: Dr Ignacio DelaCruz, CNMI

Were these animals quarantined and subjected to treatment for external parasites on arrival?

Answer: Dr Stephanie Martin, New Caledonia

Yes the animals were quarantined for 15 days. No treatment for parasite was applied because we had certification indicating that the animals had no history of vaccination or tick infection.

Question: Dr Ignacio DelaCruz, CNMI

Was the quarantine area free from ticks?
Answer: Dr Stephanie Martin, New Caledonia

Yes the area was free from ticks.

Question: Dr Ignacio DelaCruz, CNMI

Just to let you know that the tick *Boophilus microplus* has been renamed, new name of the tick is *Rhipicephalus microplus*.

Answer: Dr Stephanie Martin, New Caledonia

Yes I am aware of the new name but we preferred to use the old name

Question: Dr Subash Morzaria, FAO

I have some experience working with tick borne disease in Africa. With babesiosis, the parasite is transmitted transovarially and the ticks do not have to feed to become infected. So both the cattle and the ticks are carriers of babesia.

You can determine if you have infected ticks by the use of PCR with the appropriate primers and allowing ticks to feed on naïve cattle.

Which primers did you use for your PCR work?

Answer: Dr Stephanie Martin, New Caledonia

I am not a laboratory veterinarian and I am not sure which primers were used however, I am sure that the laboratory used the standard OIE methods.

Question: Dr Subash Morzaria, FAO

Have you changed your protocol in terms of testing and quarantine of imported animals?

Answer: Dr Stephanie Martin, New Caledonia

Yes we have

Question: Dr Ignacio DelaCruz, CNMI

I have a question for Dr Morzaria, what is the best method of importing live animals to ensure freedom from babesia?
Answer: Dr Subash Morzaria, FAo

With *B. bovis* young calves up to 2 days old have been found to be infected.

To avoid importing babesiosis you must be careful to check that animals have no previous exposure. With babesiosis, any previous infection will mean that animals are in a carrier state. There is also work being done in Japan that is looking at determining if ticks are infected with babesia.

**Summary country presentation: PNG**

Dr Nime Kapo

Prioritised TADs for PNG are: HPAI, FMD, CSF and NCD. Other diseases of importance include porcine cysterciosis, rabies, PPR and varroosis of honey bees.

The diagnostic capacity of PNG to carry out surveillance for TADs has received a boost recently with the upgrading of the animal health laboratory facilities; however confirmatory diagnostic tests are still carried out at the AAHL in Australia. The laboratory staff are very capable but would benefit from further training in new diagnostic techniques. There is also a desire to construct a new laboratory facility to provide more working space for staff and allow the introduction of clinical microbiology and PCR techniques in the future.

The veterinary services currently carry out limited surveillance activities for several TADs. These activities include both passive surveillance based on abattoir reports, disease reports and syndromic surveillance. Active surveillance is carried out on the western land border with Irian Jaya and through the use of sentinel herds. There is a need to extend surveillance to the smaller islands due to the risks of disease introductions via boats.

Currently disease reporting is done from field officers to the CVO. Timeliness of reporting of disease events to the CVO to allow the mounting of an effective response is a major concern given the difficulties/costs involved in accessing remote areas.
All the prioritised TADs are notifiable disease under the current legislation, in the event of a disease incursion a containment and eradication policy is applied in the first instance. Vaccination may be considered if necessary. Priority needs for TAD control include:

- Improvement of HPAI serological diagnostic capacity in line with the laboratory role as a SPC referral laboratory
- The development of diagnostic capacity for FMD and CSF
- Physical laboratory infrastructure improvement
- No vaccination against TADs
- Participation in both ASEAN and SPC meetings for GF-TADs
- Improvements in epidemiological/surveillance capacity is limited
- The creation of a emergency response fund to facilitate rapid responses to TAD incursions
- Improvements in the timeliness of disease reporting

Question: David Thomson, SPC

When you talk about rapid response to disease reports what are the real issues that are difficult to deal with in that regard?

Answer: Dr Nime Kapo, PNG

Sometimes we get reports of diseases in very remote areas from villagers that have been trained in disease surveillance. Often disease reports come in very late(i.e they are delayed) and it is very costly to respond as we often need to charter aircraft.

Comment: Dr Carolyn Benigno, FAO

For your information APHCA has some emergency assistance funds that are available to members. You just need to write to Hans, however, we will need to sort out a mechanism for transferring funds to PNG possibly through one of the UN agencies that has an office there.
Question: Dr Teruhide Fujita, OIE

You have said that your laboratory has been designated as one of the reference laboratories for the Pacific region, is this a SPC definition?

Answer: Dr Nime Kapo, PNG

Yes it is one of the three designated regional reference laboratories in the PRIPPP.

Comment: Dr David Thomson, SPC

Yes this is an issue of definition; these laboratories are regional referral facilities and not reference laboratories under the normal OIE definition. The reference laboratory for PNG is the AAHL in Geelong.

Summary country presentation: Federated States of Micronesia

Mr Engly Ioanis

The prioritised TADs for the FSM are: HPAI, NCD, Rabies. Rabies has been listed because of our association with the USA which has seen a number of cats and dogs being imported into the FSM.

Currently the FSM has no animal health diagnostic infrastructure or human resource.

At present there are no veterinary structures in place for disease reporting, there is no disease surveillance being carried out, the most recent disease survey was carried in 1996.

Policies and regulations for the control of prioritized TADs are split between the national and state governments.

Priority needs for TAD control are:

- The establishment of diagnostic capability
- The development of appropriate infrastructure and human resource
- The establishment of a veterinary structure for disease reporting
- Establishment of a surveillance capacity in country of widely scattered atolls
- Training for existing quarantine personnel
- To raise the priority of animal health to both state and national governments
The development of an appropriate disease surveillance programme
• The provision of the required human and financial resources

Summary country presentation: Samoa
Tiatia Tevita

The prioritised TAD for Samoa are HPAI, FMD and CSF. Based on the last disease survey carried out in 1997 these diseases are not present in Samoa. There is no regular surveillance done for any of the prioritised TADs, targeted surveillance is carried out for HPAI using rapid test kits.

There is no diagnostic capacity for the prioritised TADs. Samoa has only one government veterinarian and at present the veterinary laboratory only has the ability to carry out parasitology work all other testing is done in New Zealand.

There are plans to upgrade the existing laboratory facility depending on the availability of funding; one officer is currently undergoing training in laboratory diagnostic methods for zoonoses in Japan.

Currently disease reporting is done from field officers through to the Principal Animal Health Officer to the Director Animal Production and Health.

Government policy for the control of prioritised TADs is based on a generic plan; a specific plan has been prepared for HPAI.

Priority needs for TAD control are:

• The development of laboratory capacity

• Training of human resources in aspects of disease investigation and surveillance

• The review of existing legislation particularly with regards to compensation.

Question: Dr Subash Morzaria, FAO

I want to try to understand the situation with diagnostic facilities, do you have any connection with human health diagnostic facilities, and are the human health facilities better than yours?
Answer: Tiatia Tevita, Samoa

The human health facilities are much better than ours. We tried to work together with the human health laboratory under the PRIPPP but this did not work.

Comment: Ms Jennie Fischer, SPC

In terms of the issue of sharing laboratory facilities, PRIPPP tried pushing the issue of sharing of laboratory resources from both the human and animal sides, but the biggest stumbling block is the WHO guidelines on what can or cannot be done in human health laboratories. We have not found a way around this problem yet.

Comment: Dr David Thomson, SPC

I would like to add to that, in many PICTS there a low numbers of animal health accessions so it is difficult to sustain animal health laboratory capacity. Accession numbers are also low on the human health side so practically it would be sensible to combine the human and animal health laboratory systems but the WHO guidelines make this difficult.

**Summary country presentation: Tonga**

Mr Otenili Pifeleti

The situation in Tonga is almost exactly the same as that in Samoa.

The main TAD of concern in Tonga at this point in time is HPAI. A preparedness plan has been developed and endorsed by government.

At this time Tonga has no diagnostic capacity of priority TADS, the animal health laboratory constructed in 1972 is in a very poor state. The Livestock Section of the Department of Agriculture is currently staffed by 1 short term volunteer veterinarian (from Japan) and 13 livestock officers.

Currently disease reporting is from field officers to the head of the Livestock section who reports to the Director of Agriculture.

Priority needs for TAD control are:
• The establishment of laboratory facilities
• To raise the priority of animal health to government decision makers
• The training of human resources in aspects of disease investigation and surveillance
• The development of veterinary capacity

Summary country presentation: Vanuatu
Mr Benuel Tarilongi

Vanuatu is unique in the region because it is an exporter of beef to markets in Australia, New Zealand, PNG, the Solomon Islands and Japan. Much of the focus of livestock sector policies is aimed at maintaining access to international markets, improving production through the improvement of feeding and genetics, disease control and prevent the entry of TADs through the use of appropriate biosecurity measures.

At this time Vanuatu has no diagnostic laboratory capacity for TADs. The Animal health service currently employs 2 veterinarians and has run down veterinary laboratory which is staffed by one laboratory technician.

Vanuatu declared freedom from TB and Brucellosis in 2002, the main health problem at this time is Bovine Viral Campylobacteriosis which we attempting to control through a programme of bull vaccination.

Priorities for the development of the livestock sector are:

• Need to strengthen extension service to increase stock number and maintain the health status of the national herd.
• The need to address production problems such as inbreeding, lack of good husbandry practices and high cost of production (inputs like vaccines, transport cost)
• The development of an improved system for reporting of diseases from the outer islands
• The development of facilities, infrastructure and technical capacity in disease diagnosis
• The need to foster stronger Private-public partnership
Questions: Dr Ignacio DelaCruz, CNMI

What disease is Vanuatu vaccinating for and do you currently use AI for breed improvement?

Answer: Mr Benuel Tarilongi, Vanuatu

We are currently vaccinating for Bovine Viral Campylobacteriosis.

Yes we currently do AI though it is mostly done on the large farms and government stations. One of the Japanese companies in Vanuatu has imported embryos in the past to carry out embryo transfer.

Question: Dr Subash Morzaria, FAO

I see that you are looking at importing semen and embryos, do you also import live animals and what is your policy for testing them?

Answer: Mr Benuel Tarilongi, Vanuatu

We do not import any live animals other than pets. However, we do export live cattle to the Philippines and Indonesia

Question: Dr David Thomson, SPC

I note that you are hoping to expand your pig production from 88,000 head to around 400,000 head, do you have any information on what pig diseases are in the country and you had previously mentioned that you were not importing live animals?

Answer: Mr Benuel Tarilongi, Vanuatu

We do not have any information on the current disease status of the pigs in Vanuatu, though it would be useful to be able to get this information. Yes there is an intention to increase pig numbers in villages but there has been no discussion of importing live animals. We have imported live boars from New Caledonia in the past. I am not sure what conditions were put in place. However, our current plans are for the importation of semen rather than live animals.
Comment: Dr Teruhide Fujita, OIE

From the country reports it appears that in general all of the countries have a good animal health status and are free from priority TADs. These presentations will form the basis of our discussions for this regional GF-TAD meeting.

General Discussion
facilitated by Dr Subash Morzaria

In the general discussion this afternoon, I propose that we should review the key points in that have emerged from today’s meeting in order to develop a strategy that we can progress in tomorrow’s discussion.

The objective of this meeting is to setup regional mechanisms, the presentations today have set out the scene and we need to decide how to move forward.

The country reports have all discussed broadly the diagnostic capacity, disease reporting and surveillance, and constraints for the control of TADs. The reports have indicated that there is a narrow range of TADs of concern identified by the reporting countries these include HPAI, CSF, FMD, NCD, BT and rabies.

It appears that in the region pigs and poultry are the most important production animals though cattle and goats are also present. The case of Vanuatu stands out as it is the only major exporter of beef.

There is a wide range of diagnostic capacity ranging from the very advanced facilities in New Caledonia though most countries have very basic facilities that are restricted to basic microscopy and parasitology. The bottom line is that diagnostic capacity for TADs is in general not good.

Human resources are very limited and there are very few veterinarians available to support surveillance activities. Some countries have tried to address this by training farmers to recognise and report disease syndromes.
For regions like the Pacific that are so vulnerable to TAD it is important to have good surveillance and reporting systems in place. However, surveillance and reporting systems are very weak, and in regions like the Pacific, this would need to be strengthened because eradication will be much more difficult.

The main constraints to the control of TAD include:

- Lack of funding,
- a lack of qualified staff,
- a low priority attached to livestock production and
- the absence of disease diagnostic facilities.

The situation in the region is very different from the situation in Asia. In Asia the disease situations are very similar within broad regions (e.g. greater Mekong delta). In the case of the PIR you have a large number of islands scattered over a wide area of ocean. Risk assessment may have to be based on sub-regions and priority setting may have to based on clusters of countries based on the risks present in neighbouring countries.

The absence of serious TAD is seen a constraint to the development of diagnostic capacity as governments do not give priority to animal health services. There may be a need to carry out a benefit cost analysis to establish what level of capacity, laboratories will only function well if they are kept busy and have a lot of practice in carrying out tests. So perhaps we should consider sending samples for testing to neighbouring countries rather than setting up a large number of in country laboratories.

The socio-economic issues were handled differently by different countries, it would have been beneficial to hear more about:

- How many people rely on livestock
- The range and types of farming systems
- How does the livestock sector contribute to the economy?

There is a need to characterise the production systems better in order to give context to the reports and encourage governments to invest in livestock. We have tended to concentrate on production animal diseases but we also need to identify zoonotic diseases which could be used to leverage future collaboration and resulting in more funding for the livestock sector.
Comment: Dr Carolyn Benigno, FAO

It is apparent that the challenges in this region will be very different from those in Asia especially with regards to the establishment of the RSU and the proposal for the establishment of a network of laboratories in the region. In order for regional laboratories to operate successfully they need to be able to do a lot of testing to maintain their technical capacity, they must be willing to accept samples from other countries, and this is often a sticking point.

Comment: Mr Benuel Tarilongi, Vanuatu

Within the region we are already divided into 3 groups: Melanesia, Micronesia and Polynesia. Each region will have its own referral laboratory. We also want to develop the national laboratories to a level that will be able to store and send specimens and carry out a number of simple tests.

Comment: Dr David Thomson, SPC

None of the regional referral laboratories are actually operating at this point in time, the delays are largely related to financial constraints to carrying out the laboratory upgrading works and technical capacity within the laboratory to within the laboratories to implement the testing technologies. Field epidemiological capacity amongst the persons that would be supplying samples into the laboratory also needs to be upgraded.

Question: Dr Subash Morzaria, FAO

What are the priorities for these laboratories to reach the required levels and how much would it cost?

Comment: Dr Elva Borja, SPC

Tomorrow I can give you a short presentation on the laboratory strategy prepared for the Pacific Islands if you wish

Comment: Dr Narendra Singh, SPC

In Human Health we have already developed a regional laboratory network, this network is working well and there are lesson to be learned. The network eases systems for the preparation and shipping of sample. In the past countries themselves have invested in their own labs but there has been no regional investment in level 1 and 2 laboratories.
We also need to consider priorities for surveillance that enables a regular throughput of samples so that laboratories are kept busy.

Question: Dr Ignacio DelaCruz, CNMI

I want to ask Dr Shimohira a question, he mentioned a diagnostic lab that has recently been upgraded with new equipment. I was wondering where the lab is and if it is accessible to PICTS?

Answer: Dr Itsuo Shimohira, OIE

Nine countries have had national laboratory upgrades in SE Asia

Comment: Dr Teruhide Fujita, OIE

The basic concept is to strengthen laboratory capacity by provision of diagnostic equipment, this has mainly been done for HPAI. In SE Asia there are 19 laboratories working in the area of HPAI diagnosis.

Comment: Dr Subash Morzaria, FAO

In some countries in SE Asia they have problems getting hold of the appropriate human resources to manage the laboratories. Education levels need to be considered as a part of the capacity building programme.

Comment: Dr Valerie Roy, French Polynesia

For now samples from French Polynesia are sent to France for analysis. What center is there for samples in the Pacific.

We do not have the capacity to manufacture vaccines nor do we know where to source vaccines in the event of exotic disease incursions.

Comment: Dr Leo Leituala. American Samoa

I can see the difference between the Pacific and SE Asia. We have little exposure to TAD and have in the past worked on preparing responses to H1N1 and H5N1. I would like to lend my support to the One World One Health policy. Perhaps if a few diseases manage to get in then the government will allocate the funds that would allow us to improve our facilities.
Comment: Dr Ian Peebles, SPC

The characterisation of the livestock sector needs to be done as the contribution of the livestock sector in the region is important. In the PNG report Varroa mites in bees were mentioned. Honey production is important in many PICTS and pollination even more so. Varroa which is probably being spread on shipping vessels is becoming an important threat it could have significant effects on agricultural production in the region, especially in integrated smallholder production systems.

The Solomon Islands have Asian bees that arrived from Papua New Guinea, these all pose a threat to countries like Niue which has a profitable hone industry

Comment: Dr Subash Morzaria, FAO

We only considered terrestrial livestock and have ignored fish and bees, however, if you are building generic diagnostic and surveillance capacity this would allow work to be done with other species as well.

Comment: David Thomson, SPC

Coming back to the point about characterisation of production systems. I would like to raise the issue of communications and adequate advocacy. A lot of work needs to be done in relation to communication for surveillance and control, this will also benefit livestock production

Comment: Dr Nime Kapo, PNG

If we have a zoonosis in the region we will get a lot more support from donors and governments.

Currently we depend on donors like the FAO to assist when required. I was wondering if we could work through the SPC to alert donors like the FAO of the importance if Animal Health in terms of food security and public health. This could result in better funding for livestock related activities.

Comment: Dr Subash Morzaria, FAO

85-90% of the FAO budget is spent on crop production activities largely in Africa. As you know, when countries become economically stronger their demand for meat products increases, this demand is especially high in large cities.

We need to better characterize the livestock production sector and put it in its socio-economic context.
We have discussed the laboratory issues and it appears that we need to develop the capacity of referral laboratories. We need to define what is required for the laboratories and think about the human resource requirements of the labs as well as surveillance activities that will keep the laboratories busy.

I like the idea of supporting the One World One Health policy it shows that we are thinking holistically and are interested in collaboration.

Influenza A/H1N1 presents an opportunity to raise the profile of livestock in the region.

Cross-cutting issues raised include communications, biosecurity and more capacity building to support activities against a wide range of emerging diseases other than those of terrestrial animals.

**Short term strategies for control of transboundary animal diseases in the Pacific region**

Dr David Thomson

The PRIPPP was designed to build the capacity of Pacific Island countries and territories (PICTs) to deal with the potential threat of avian influenza, pandemic influenza and other emerging diseases. The goal of PRIPPP is to have “PICTs able to effectively and efficiently respond to emerging diseases, in particular highly pathogenic avian influenza (HPAI) and pandemic influenza”.

The PRIPPP mid-term review last year identified that significant progress had been made in a number of areas that include: the need to adopt a One World One Health approach to and the means to ensure the sustainability of project outcomes following PRIPPP.

There are a number of short-term strategies (next 12-15 month) that need to be addressed in the region for prevention and control of trans-boundary animal diseases. Those included under the PRIPPP are:

- on-going support for multi-sectoral technical task forces established in the PICTs for emerging and trans-boundary disease preparedness and response, including emphasis on the “one world – one health” concept
- preparedness and response planning at both PICT and regional levels, including promotion of sub-national and cross-sectoral sub-planning activities within the larger PICTs and promotion model preparedness plans for adaptation by PICTs
- testing of respective preparedness plans
• development of standard operating procedures to support operationalization of plans, including development of model SOP’s for adaptation by PICTs
• advocacy for policy development at PICT and regional levels to better support plans and their implementation
• major efforts to define and commence implementation of a regional laboratory capacity-building strategy centred around establishment of capacities to perform level 2 diagnostic procedures (up to RRT-PCR) within three sub-regional laboratories (Fiji, PNG and Guam) to better service the PICTs, level 1 lab capacities in selected PICTs and relying on established regional reference laboratories for confirmatory diagnosis.
• operationalization of the Pacific Animal Health Laboratory Network (PAHLNet) with linkages to level 2 and reference laboratories in Australia, New Zealand, USA and EU (France)
• paravet training, including continuation of the current Introductory course, development and implementation of additional modules (including Meat Hygiene, Animal Welfare, Emergency Management, Communications, etc.), domestication of the course into key academic institutions in selected PICTs and translation of the course into an e-learning environment.
• capacity building and training of PICT personnel in surveillance, rapid response diseases investigation, field epidemiology, disease recognition and control, and level 2 laboratory diagnostic procedures (particularly serology and immune-flouresence, infection control, technical communications and disease reporting (regional and international)
• regional technical and logistic support for emergency response to emerging and trans-boundary diseases, including efforts to enhance regional resource mobilization capabilities and arrangements
• technical support for control of currently endemic zoonoses, particularly leptospirosis, brucellosis and bovine tuberculosis
• technical support to help strengthen legislation relating to preparedness and response in the PICTs
• information management initiatives, including support for TADInfo and/or similar animal health information systems, website developments and the PRIPPP databases focused upon technical support and technical capacity-building information
• a small grants scheme to assist PICTs secure funding for small activities aimed at addressing identified capacity weaknesses
• monitoring and evaluation activities, particularly focusing upon preparedness and response capacities and competencies within the PICTs utilizing tools and on-line databases developed under PRIPPP, including the PRIPPP Checklist, Legislation Checklist and Laboratory Capacity Checklist and databases developed around these assessment tools.
• Strategic partnerships with many others, including WHO, FAO, OIE, CDC, AQIS/NAQS, NZ MAF and related Authorities, AusAid, NZAid, QDPI, USP, UNRE, ADAP, etc.

Under the Biosecurity and Trade group within Land Resources Division of SPC, other relevant activities include:
• model biosecurity legislation – continuing efforts to get respective PICT adaptations adopted to harmonize legislative and procedural approaches within the region
• technical support and training for import risk assessment
• a biosecurity information facility compiling import risk assessment information, import protocols and standards and operational procedures for biosecurity and related border control.
• on-going training and support for implementation of the model biosecurity bill in PICTs that adopt it.

There have been significant developments in these areas already under the SPC PRIPPP and Biosecurity and Trade activities, but key capacities in most PICTs and across the region remain weak. It is, therefore very important to secure commitment and support within the region and from assistance partners to follow on with and from these initiatives after PRIPPP is completed in mid 2010.
The animal health laboratory network and specimen referral system
Dr Elva Borja

The proposed regional animal health laboratory system is based upon the development of a 3 tiered network of laboratories. At the lowest level are the level 1 laboratories, these are national laboratories with limited capacity to collect process and ship samples and perform basic microscopy. Level 2 laboratories are the sub-regional referral laboratories that are established to facilitate surveillance activities in their respective sub-regions. There are three sub-regional laboratories planned for Fiji, Guam and PNG, work on the laboratory in PNG is well advanced though much remains to be done in Guam and Fiji. There is also a possibility for the use of facilities in New Caledonia and the Northern Marianas College as level 2 laboratories even though they may not be very accessible.

It is proposed that the laboratory in PNG will provide services to the Solomon Islands and Vanuatu, the Fiji laboratory will provide services to Tuvalu, Kiribati, Samoa and Tonga, the Guam laboratory will service the PICTS in the North Pacific. Other countries such as the Cook Islands, Niue, Nauru, French Polynesia and Pitcairn may have better flight access to Australia and New Zealand, the idea is that these countries should be linked directly to laboratories Australian and New Zealand.

The level 3 laboratories are the international reference laboratories in or around the region these include AAHL in Geelong, the NVS laboratory in Ames, Iowa; Hokkaido University in Japan and the Canadian Food Inspection Agency, National Centre for Foreign Animal Disease.

To date the major laboratory developments have been the upgrading of laboratory facilities in PNG and Palau. The contribution of the countries in the development of the laboratory facilities must be acknowledged. Each country is responsible for providing a facility to house the laboratory equipment. Training for laboratory technicians is provided through subregional training programmes. Training to date has included dangerous goods regulations training to ensure countries have the ability to prepare and ship samples. An SOP/template has been developed to assist laboratory staff in the region with the packaging and shipping of samples. Further training in serology for laboratory technicians is planned over the next 6 months.

A regional animal health laboratory network has been established and sub-regional meetings have been held in Fiji and Guam.
The HPAI Pandemic Checklist
Mr Laurie Fooks

The HPAI pandemic checklist was introduced as a tool to help PICTS assess their state of preparedness and guide them in the development of their preparedness plans. The preparedness activities carried out for the H5N1 pandemic have helped countries in their responses to H1N1. The checklist is now being used as monitoring tool on a web based database that allows PICTS to rapidly access information on their state of preparedness and make updates as changes occur.

The checklist covers both human and animal health preparedness and the co-ordination of human and animal health activities. In terms of the preparedness of the animal health sector some of the plan components covered by the checklist includes: cross-sectoral linkages, command and control system, the legal framework that is the basis for actions, the availability of surveillance personnel and surveillance activities, outbreak investigation management, laboratory capacity and access to reference laboratories, country action plans in relation to animal health and human health services.

The GF-TADS Pacific Islands Regional Strategy
Dr Ian Peebles

The development of an effective regional GF TADS strategy in the SPC region will of necessity be based upon: the socio-economic characterisation of the livestock sector, the effective implementation of biosecurity measures, the establishment of effective early warning systems at the national and regional levels, the development of veterinary capacity.

Socio-economic characterisation of the livestock sector describing production systems (subsistence, small holder or commercial) is required to highlight the important roles of animals in the region in terms of food security, social and cultural activities, the contribution of the sector to employment and income etc. This information is essential when attempting to influence the governments and policy makers to allocate the additional resources required to the sector.

The protection of both animal and human populations through the implementation of improved biosecurity measures will be key to preventing the incursions of TADs into the region, this will require: the development of appropriate import policies and quarantine procedures for animal and animal products, the development of harmonised legislation to facilitate the safe trade in animals and animal products, the implementation of appropriate border controls, a continuous monitoring of emerging
threats through regional and international organisation such as the OIE and WHO and the provision of appropriate training at the national and regional levels.

National early warning systems, including the establishment of national investigation and surveillance capacity, will depend on the capacity of countries to implement timely disease investigation and reporting. Rapid test kits are a useful diagnostic tool to assist in early detection of transboundary animal diseases but their field application should be restricted to more generic test kits (e.g. influenza A) rather than strain-specific test kits (e.g. H5N1). Effective systems for specimen handling, packaging and transport linkages to diagnostic reference laboratories are essential to enable diagnostic confirmation. At the regional level, established networks such as PHOVAPS, Pacvet and Pahlnet are essential for the rapid dissemination of information on TADs and other emerging diseases.

Currently most PICTS face severe limitations in animal health field service capacity, there is an ongoing need to provide training in the areas of: field investigation, specimen collection and packaging. The establishment of national disease information databases which includes information on animal populations is also required to enable effective planning of disease surveys as well as effective management of disease events. Timely information management including the reporting of animal diseases is essential to minimise the risk of disease spread and to establish and maintain the confidence of trading partners. In view of the limitations faced by most PICTS cost effective passive disease surveillance measures based on syndromes will need to be developed with active surveillance and monitoring being implemented as needed (eg for bee pests).

The development of national and regional diagnostic capacity will require significant funding and support through the development of a regional laboratory networking strategy and the identification and development of systems for shipping samples to reference and referral laboratories

The maintenance of high levels of emergency preparedness throughout the SPC region will be essential in combating TADs. This will require the: maintenance of preparedness checklists, delivery of appropriate training, formulation of SOPs for implementation in emergency responses, development and regular testing of national and regional response plans.

Much of the required skills and capacity in the region will need to be built in-situ via institutional partnerships to develop increased training capacity within the region. Attention should also be given to identify partnerships with training institutes and agencies in Asia to provide veterinarians and paravets in the region with first-hand experience of significant diseases of concern such as HPAI and FMD. This is expected to result in an increase in the demand and scope of training for both paravets and veterinary professionals in the near future.
Discussion of presentations day 2

Comment: Dr Carolyn Benigno, FAO

Thank you very much, we have just had a series of presentations on the PRIPPP, first we had David describe the components of the project then we had Elva describe the animal health laboratory capacity building strategy while Laurie described the PRIPPP information systems. Finally Ian presented some of the long term strategies options for disease preparedness and control. At this point I will open up the floor for questions and discussion so that we can obtain your views on the way forward to be packaged into some meeting recommendations.

Comment: Dr Nime Kapo, PNG

It might help the discussions if we break up into our PHOVAPS subgroups for discussions then report back to the main group.

Comment: Dr Carolyn Benigno, FAO

I realize that this is a big group and it may be difficult to try and hold a plenary session. I will leave it up to you to split into your PHOVAPS subgroups. Can I give you about 30 minutes? From the presentation and information today and yesterday, what is your view on the way to go forward with GF-TADs for Pacific region, what are the needs and priority diseases etc.? 
Results of Sub-Group Discussions.

The results of sub-group discussions are summarised and tabulated in table 1 below:

Discussion of Polynesia presentation

Question: Dr Subash Morzaria, FAO

You have no recommendation about reference labs or referral labs in Polynesia?

Answer: Tiatia Tevita

We have made a general statement about laboratory capacity. The idea there is that, before we construct any laboratories, we have to thoroughly investigate including how many animals are in the area, what is the capacity of the people in the area so as to avoid constructing laboratories that become white elephants.

Comment: Mr Itaia Lausaveve, Tuvalu

At the national level we have small laboratories that need assistance for their set up, this assistance involves the provision of training and some equipment.

Comment: Mr Tiria Rere, Cook Islands

As Elva was saying before in her presentation some of the countries in the Polynesian group have good access to Australia and New Zealand. For example, in the Cook Islands, most of our flights come in from New Zealand, so it is best for us to think carefully before we think about building laboratories it may be that we should use the available laboratories in Australian and New Zealand which is easier for us.

Question: Dr Teruhide Fujita, OIE

I wonder if the group discussed the important animal diseases common to each group and identified any priority diseases?
Table 1. Summary of Sub-regional group discussions on activities required for TAD prevention and control

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<th>Melanesia</th>
<th>Polynesia</th>
<th>Micronesia</th>
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<tr>
<td>Priority TADS</td>
<td>Fiji, New Caledonia, Solomon Islands, PNG, Vanuatu</td>
<td>American Samoa, Cook Islands, French Polynesia, Samoa, Tokelau, Tuvalu, Tonga, FSM, Palau, NMI</td>
<td></td>
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<tr>
<td>Strategy</td>
<td>Baseline surveillance</td>
<td>Dissemination of information on current animal health status. Advocacy to government. Awareness creation and information dissemination on TADS</td>
<td>Sub-regional meetings of PHOVAPS, Paravet training, Regular monitoring and evaluation every 2 years</td>
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<td>Baseline livestock Information</td>
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<td>livestock census, social-economics analysis</td>
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<td>Paravet, field epidemiology</td>
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<td>Advocacy/cross sectoral communication strategy</td>
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<td>Awareness in high risk areas</td>
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<td>General awareness</td>
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<td>Policy development</td>
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<tr>
<td>Lab capacities</td>
<td>Buildings renovated</td>
<td>Appropriate laboratory facilities in place (buildings and equipment)</td>
<td>Training of technicians Provision of supplies and equipment for level 1 &amp; 2 Labs</td>
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<td>Trained staff</td>
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<td>Trained staff</td>
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<td>Equipment</td>
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<tr>
<td>Emergency response</td>
<td>Funds to help containment strategy implementation</td>
<td>PPE stockpiles and sourcing, Plan preparation, Plan testing, Biosecurity legislation, Border control</td>
<td>Surveillance for TADS, Response plans in place Plans tested with SPC Border control Biosecurity legislation</td>
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<tr>
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<td>Funds for samples shipping, identification of specimen shipping routes</td>
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<tr>
<td>Training</td>
<td>Lab technicians</td>
<td>Surveillance systems, Laboratory technicians</td>
<td>Surveillance systems Targeted TADS</td>
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<td>Communication training</td>
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<td></td>
<td>Disease recognition for priority TADS</td>
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</tbody>
</table>
Answer: Tiatia Tevita, Samoa

We came to agree that HPAI is the first priority.

Discussion of Micronesia Presentation

Question: Mr Tiria Rere, Cook Islands

In your presentation you mentioned shipping protocols what is the issue with that?

Answer: Mr Engly Ioanis, FSM

The issue is in regards to importation of animals, in the presentation from New Caledonia yesterday we heard that disease was introduced even though the relevant health certificates were signed by the exporting country. There must be a way of ensuring that animals when animals are shipped there is some mechanism to protect PICTS from such errors because the costs of bringing the disease under control are very high and in Micronesia I doubt if we could afford to do it.

Comment: Mr Fred Sengebau, Palau

One of the things we looked at is the new biosecurity bill that is being adopted in a number of the PICTs. We need to make sure we have the adequate regulations for movement of animals and animal products in our countries. If necessary we may need to put in policies or regulations to ensure that animals are healthy before they are allowed into the country, after all prevention is better than cure.

Question: Dr Leo Leituala, American Samoa

Does the shipping protocol does include proper IATA procedures and packaging of samples from your laboratories

Answer: Mr Engly Ioanis, FSM

Yes, that is included too.

Question: Dr Teruhide Fujita, OIE

What is the priority animal disease in Micronesia taking into account the farming systems in your region?
Answer: Mr Engly Ioanis, FSM

I forgot to mention that all of these activities will be based in the target diseases. In Micronesia we have mostly chicken and swine, there are some cattle but only Saipan and Guam raise cattle.

Question: Dr Teruhide Fujita, OIE

So in Micronesia we are probably talking about HPAI and classical swine fever?

Answer: Mr Engly Ioanis, FSM

Yes

**Discussion of Melanesia presentation**

Question: Dr Leo Leituala, American Samoa

What are some of the important policies for prevention and control of TADS?

Answer: Dr Nime Kapo, PNG

This was basically input from SPC about problems that they face when working in PICTS, could I ask David Thomson to elaborate on this.

Comment: Dr David Thomson, SPC

One is compensation policies and arrangements for emergency control operations. I think that there are a lot of policies around the need to respond quickly in emergency situations, vaccination policies for TADs, there are also issues and policies to deal with regard to cross-sectoral arrangements between animal health, public health and other agencies.

Question: Dr Ignacio DelaCruz, CNMI

You mentioned bluetongue disease. Is that disease important in cattle? Is testing for bluetongue in cattle for export a requirement?
Answer: Dr Robin Achari, Fiji

Bluetongue is a disease of sheep but cattle are carriers/intermediate host of the virus. In the case of Fiji, we do not import animals from zones where the bluetongue vector is present.

Question: Dr Ignacio DelaCruz, CNMI

So bluetongue disease is not an important disease for cattle?

Answer: Dr Robin Achari, Fiji

No, it does not cause any clinical signs in cattle.

Answer: Dr David Thomson, SPC

The strains of bluetongue in Australia do not cause any problems at all in cattle, but they are experiencing some problems with a different vector in Europe. The ability of bluetongue to cause disease is related to efficiency of the vector, the dose of virus that the animals get, and the type of animal and how naïve the animals are when they are exposed. So they are experiencing is an ecological situation surrounding clinical disease in cattle, generally it is not as severe disease in cattle as it is in sheep and goats.

Question: Dr Ignacio DelaCruz, CNMI

So bluetongue is mostly of sheep, how important is it in goats?

Answer: Dr David Thomson, SPC

It is still important in goats

Question: Dr Carolyn Benigno, FAO

I have a question about this group and also the Micronesian group about access to laboratories because the Polynesian group said that they had good access to laboratories in Australia and New Zealand, what about the other groups?
Answer: Dr Nime Kapo, PNG

Melanesia also has easy access to Australia and NZ but I think that it is also important to have the capacity to do the baseline diagnosis especially in disease response situations where we need to get answers quickly.

Comment: Dr Valerie Roy, French Polynesia

I would like to add that for French Polynesia we don’t send samples to Australia and New Zealand we send them to France

Comment: Mr Fred Sengebau, Palau

Micronesia has sent samples to Geelong in Australia however the protocol is not good. The last samples we sent, it took us almost 3 months to get the results back, the problem was with Continental Airlines. This is why we proposed that the regional referral laboratory in Micronesia be established in the University Guam.

Comment: Dr Elva Borja, SPC

The Micronesian countries are also mandated to send samples to the USGS laboratories in Hawaii and Wisconsin. Especially those that are US associated or US territories, but all of them need to go to Guam to send samples to the US or Australia, this is because all of the flights go through Guam.

French Polynesia is mandated to send their samples to France though initial discussions with New Zealand biosecurity indicate that they would be willing to explore the possibility of receiving samples from the French territories.

Comment: Dr David Thomson, SPC

In PNG, experience has shown that even though you have ready access, the times in chain are often quite long, several days and if you are dealing with virology specimens that makes it very difficult to get virus isolation type testing.

Question: Dr Ignacio DelaCruz, CNMI
I would like to add the National Veterinary Services Laboratory in Ames Iowa which is run by the USDA APHIS veterinary service is also available for Micronesia. I would like to ask Dr. Fujita if our specimens can transit Tokyo on their way to the US mainland?

Question: Dr Teruhide Fujita, OIE

At this moment, I cannot answer your question I will have to contact the regional authority in Japan.

Dr Carolyn Benigno, FAO

I am reminded that morning tea is ready so at this time we will halt discussions. To give you a summary the three groups listed as important components:

- Emergency preparedness,
- strengthening surveillance,
- emphasis on border control which includes regulations and protocols,
- training has been crosscutting this has included paravets and laboratory technicians,
- laboratory capacity,
- production system characterisation looking at the livestock profiles of each country,
- assessing the human resources at the national level,
- animal health information system,
- awareness campaigns for TADS,
- policies on compensation and accessing emergency funds,
- common TADS of concern are HPAI, FMD, CSF (1 country), Q fever, bluetongue rabies and PPR

**Closing Remarks**

Dr Teruhide Fujita

On behalf of the Permanent Secretariat of the Regional Steering Committee of GF-TADs, I would like to express my sincere gratitude and thankfulness to all of you. I think our meeting for the two days; yesterday and today has quite successfully completed and I want to congratulate all of you for the successful meeting which produced quit a good result with a set of recommendations.

I think our success of the meeting was particularly based on your cooperative work, the active participation and discussions during the meeting. Also I would like to say it is due in no small part to the Secretariat of SPC represented by Dr Ken Cokanasiga and his team for their very cooperative work and kind hospitality.
As you know well, we discussed the overall aspect of development of animal health issues in this region. The GF-TADs programme and those recommendations will be reported in the 3rd Regional Steering Committee Meeting of GF-TADs which will be held in Tokyo on 4-5 July, next month. I hope our discussions will be well effective and authorized by the Regional Steering Committee Meeting.

Finally I hope you all safe trip to your home countries and also wish to see you again in the next meeting.
**Meeting Programme: FAO/OIE Sub-Regional Meeting of GF-TADs**
for SPC Region in collaboration with SPC (Nadi, Fiji: 25-26 June, 2009.)

**Day 1: Thursday 25 June 2009**

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<th>Schedule</th>
<th>Topics</th>
<th>Chair/Speakers</th>
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<tr>
<td>09:00-09:30</td>
<td><strong>Opening ceremony</strong>&lt;br&gt;Opening speech&lt;br&gt;Opening speech&lt;br&gt;Opening speech</td>
<td>E. Ioanis (Chair of PHOVAPS)&lt;br&gt;T. Fujita (OIE)&lt;br&gt;S. Morzaria (FAO)&lt;br&gt;K. Cokanasiga (SPC)</td>
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<tr>
<td>09:30-10:30</td>
<td><strong>SESSION 1: Rationale and objectives of GF-TADs</strong>&lt;br&gt;GF-TADs Programme and Initiative in Asia Pacific&lt;br&gt;FAO/OIE Chart of Complementarities</td>
<td>Chair: K. Cokanasiga (SPC)&lt;br&gt;T. Fujita (OIE)&lt;br&gt;S. Morzaria (FAO)</td>
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<td><em>Break for photo session&lt;br&gt;Coffee break (1/2h)</em></td>
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<td>11:00-12:00</td>
<td><strong>SESSION 2: Achievements at the Regional and Sub-Regional levels since 2005</strong>&lt;br&gt;Progress of activities in the Asian and Pacific Region on GF-TADs&lt;br&gt;SPC structural arrangements</td>
<td>Chair: K Cokanasiga (SPC)&lt;br&gt;C. Benigno (FAO)&lt;br&gt;I. Shimohira (OIE)&lt;br&gt;K. Cokanasiga (SPC)</td>
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<td><em>Lunch (1.5h)</em></td>
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<td>13:30-14:30</td>
<td><strong>SESSION 3: Brief report on TADs control of selected member countries</strong>&lt;br&gt;Fiji, New Caledonia, Papua New Guinea</td>
<td>Chair: T. Fujita (OIE)&lt;br&gt;Country’s Representatives</td>
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<td><em>Coffee break (1/4h)</em></td>
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<td>14:45-15:45</td>
<td><strong>SESSION 3: Brief report on TADs control of selected member countries (continued)</strong>&lt;br&gt;FSM, Samoa, Tonga, Vanuatu</td>
<td>Chair: T. Fujita (OIE)&lt;br&gt;Country’s Representatives</td>
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<tr>
<td>15:45-17:00</td>
<td>Round up discussions of the country reports including discussion on</td>
<td>Chair: S. Morzaria (FAO)</td>
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general orientations for future activities

End of the day

18:00

Welcoming Cocktail Reception by host organizations in collaboration with SPC, Pool side

Day 2: Friday 26 June 2009

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<tr>
<th>Schedule</th>
<th>Topics</th>
<th>Chair/Speakers</th>
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<tr>
<td>08:30 - 10:30</td>
<td><strong>SESSION 4</strong>: The way forward</td>
<td>Chair: C. Benigno (FAO)</td>
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<td></td>
<td>Deciding on general orientations for 2009-2010</td>
<td>D. Thomson (SPC)</td>
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<tr>
<td>10:30 - 11:30</td>
<td>HPAI preparedness in PICT</td>
<td>I. Peebles (SPC)</td>
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<td>Prevention and preparedness for other TADs</td>
<td>D. Thomson (SPC)</td>
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<td>Plans on priority TADs including long-term strategies, RSU, Epidemiological and Laboratory Networks</td>
<td>C. Benigno (FAO)</td>
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<tr>
<td>10:30 - 11:30</td>
<td>Coffee break 1H</td>
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<tr>
<td>11:30</td>
<td>Discussions in sub-groups of needs for GF-TAD</td>
<td>S. Morzaria (FAO)</td>
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<tr>
<td>12:30</td>
<td>Preparation for proposal to the 3rd RSC GF-TADs meeting</td>
<td>Dr T Fujita (OIE)</td>
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<td>Wrap up: Conclusions</td>
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<td><strong>LUNCH</strong></td>
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<td><strong>End of the day</strong></td>
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</tbody>
</table>
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