

**AUSAID PROJECT  
ENHANCED APPLICATIONS OF CLIMATE PREDICTIONS IN  
PACIFIC ISLAND COUNTRIES  
(PI-CPP)**

***Report on the Stakeholders Workshop on Application of Climate  
Predictions in Fiji***

Government Training Centre, Suva  
16<sup>th</sup> to 18<sup>th</sup> March 2005

**Introduction**

The project is now moving into its second and most important phase, which involves the roll-out of the revised (near-final) Seasonal Forecast System (called SCOPIC) to the local NMSs, training of local NMS personnel in statistics and forecast production and distribution, and the conducting of stakeholder workshops. In addition, the visiting party investigated possible pilot project, for the application of climate forecast information in climate sensitive industries, most notably fisheries, agriculture and water.

The third of a series of workshops under the second phase was held in Fiji. The project team spent two days (14<sup>th</sup> and 15<sup>th</sup>) training the Fiji Meteorological Service (FMS) personnel on advance statistics and SCOPIC. They also assisted the FMS personnel with the preparation of their presentations and other relevant materials for the following 3-day workshop. About eight met staff underwent training.

The stakeholders' workshop started with a formal opening, with the opening address delivered by Ms Stacey Tennant, Second Secretary, Australian High Commission. The Director of the FMS, Mr Rajendra Prasad chaired the session. There were twenty-one participants, including three from the met service, and representatives from the following sectors: SOPAC, National Disaster Management Office, Fiji School of Medicine, Fiji Sugar Corporation, tourism, Red Cross, Fiji Electricity Authority, the Commissioner of the Western Division and several government departments (forestry, agriculture, energy, hydrology, mineral resources). Mr Noa Seru, the Activity Manager of AusAID Suva was also present at the opening and the closing session.

The objectives of the workshop were as follows.

- To demonstrate available information and stress the limitations of the forecasts, the nature of probability-based predictions;
- To demonstrate to decision-makers in climate sensitive activities the availability of, and effective and prudent use of probabilistic climate predictions as an input to decision-making;
- To train decision-makers in climate sensitive activities on the usage of probabilistic climate predictions in decision making to minimize risks in their respective sectors;
- To establish effective communication delivery channels from the PIC National Meteorological Service to its clients;
- To ascertain specific information needs, provide a forum for identifying desirable software modifications
- To train the media contacts in order to ensure most effective and accurate dissemination of the climate information, including predictions to the general

- public; and
- To identify and/or commence one of more pilot projects in some of the PIC.

The workshop was structured into six sessions: Formal Opening; The Climate System, its behaviour and consequences; Seasonal Climate Forecasting; Managing Climate Risks (case studies); The Forecasting and Decision-Making exercise and Climate Outlook Forum.

The Project Team (PT) was represented by Ms Janita Pahalad (Project Team Leader), Dr David Walland (the Bureau of Meteorology), and Dr Yahya Abawi (Queensland Department of Primary Industries).

### **Outcomes**

An evaluation of both the training of the met officers and the workshop was carried out (see attached summary report). The overall rating for the workshop ranged from *very good* to *excellent*.

It was noted that this was the first time such a workshop was conducted in Fiji. The participants and the FMS personnel found the workshop useful. A number of recommendations were made that were generally directed at the FMS. At this stage there is no strong recommendation to change any of the SCOPIC products.

### **Additional Comments**

During the training session at the FMS, met officers voiced their concern about the some of the climate data not been in right format. There are gaps in the dataset due to a number of site changes eg stations that were replaced by the AWSs (Automatic Weather Stations). The quality of the data at a number of stations has deteriorated over the years. One of the main tasks FMS is currently faced with is to determine how to implement quality assurance of their observing network.

The representative from the Fiji Pine Ltd, Naca Yalimaitoga queried about the climate observing network on the other main island of Fiji (Vanua Levu). There is a large number of observing stations, but their data is not up to the required standard. Though all observers are trained, some voluntary services want payment which is not budgeted by the FMS. Weekend observations are regularly missing or accumulated. It was also highlighted that the current network does not cater for the needs of the Department of Energy, particularly for the renewable energy purposes.

It was noted that there is no proper fire index used by the Fiji Pine Ltd, which requires short term weather/climate data including biomass data. FPL uses simple index for issuing fire danger warning to the public.

Sarah Davis from the SOPAC suggested that water restriction should be enforced if a prediction for a drought is issued by the FMS. Yalimaitoga added that about 500 fires were reported in 1986.

There was a suggestion that the FMS to run seminars on climate prediction information to reach out to more users. FMS issues Monthly Weather Summaries to a number of users but it is known that generally this information do not channel down to the operational level. The workshop has somewhat enable FMS to identify the relevant people in various sectors.

FMS is trying to implement user-pay policy to reduce “unnecessary” requests. A total of 685 requested were handled by the climate division in 2004.

The representative from the agricultural research station (Koronivia) informed the workshop that climate recording is now part of their PMS. All government departments, such as agriculture who run climate observing stations have included weather/climate observing in their Position Description documents. This action was applauded by the Project Team and the FMS.

Not much work has been done on drought impacts in Fiji, and the participants felt that this workshop could be used as a forum to start a national drought assessment network.

Some concern was raised over frequent staff turnover at the FMS, and it was suggested that training should be provided to all levels within the service. With respect to the user sectors, it may be necessary to look the value of climate information to monetary value in order to attract high level representatives. In order to assure financial sustainability through the local government funding, FMS needs to be visible through its contribution to the betterment of the national economy.

Some of the participants requested FMS to conduct in-house training of the stakeholders on climate forecasts. FMS has carried out numerous training at agricultural research stations and the forestry stations. The representatives from the FMS expressed their willingness to continue with such training arrangements.

There was some discussion on the current delay in issuing the climate forecasts (the seasonal forecast are officially released almost a month into the first month of the forecast). ATL suggested FMS to consider issuing forecast with 1 month lead (similar to the Bureau's Seasonal Climate Outlook Bulletin).

Mr Seru spoke about a "Pacific Plan" that has been developed by the Forum Secretariat, which focuses on key areas in the Pacific region, including climate change and environment. The Plan is currently been circulated to all countries.

### **Recommendations Made**

- FMS to customise information to meet the users' needs. Generally terminology used can be confusing to the users therefore there is need to simplify the information.
- FMS to simply the current Month Weather Summary, and include the conclusion on the front page.
- FMS to maintain the FMS/client network initiated by the workshop.
- Clients/participants should work closely with the FMS.
- Regional Development Office should consider using climate information in their planning.
- More similar awareness programmes/workshops should be conducted on climate prediction information and its application in decision-making in various sectors. Need more public awareness on probabilistic forecasts.
- There is a need to setup a national network to monitor and assess the impacts of droughts in Fiji.
- FMS to continue with in-house or on-site training in climate or weather information.
- High level representatives from respective organisation should be targeted for such training.
- Exposure to how similar climate prediction service is run in other neighbouring countries can be useful learning tool for the FMS.

The following recommendations were highlighted in the report prepared by Ms Riteshni Lata, FMS for her Ministry (report attached).

1. Disseminate advice/information to clients based on the tailored predictive Outcomes.
2. Predictions to be given out to agriculture sector for planning on crop planting and harvesting especially at the start of wet and dry seasons.
3. Further training to be provided to the stakeholders and users of climate information by the Fiji Meteorological Service.
4. Information released to be in the form of a simple document without jargons and in simplest language as possible.
5. Suggestion of Climate Outlook Forums to be held at the beginning of each month especially at major districts where different organizations can assemble. This would also allow the top management level to realize that FMS is striving to fulfil its mission and thus may enable funding/aid.
6. Incorporating climate predictions when planning budgets.
7. Need for more collaboration between Fiji Meteorological Services and the stakeholders. Need for the drawing up of a proposal to government asking for strategies to be put in place, which would allow for a better communication channel to be placed between FMS and the stakeholders.
8. Need for developments like road upgrade in suitable seasons to allow for Sustainability instead of carrying out work at instances of financial availability.
9. A need for Fiji Meteorological Services to promote its services as most people are still not aware of climate predictions.

### **Additional Comments**

Mr Prasad during his closing remark stated that he was quite pleased with the workshop and its outcomes. He highlighted that the staff in the Climate Division were fairly new but quite capable to handle new challenges. There is a future plan to engage a hydrologist to work with the FMS. Prasad thanked the AusAID, the Bureau, and the participants. He noted the recommendations are achievable, and pledged that FMS will try to address them. In response ATL thanked Prasad and his team for their assistance in organising the workshop, and also acknowledged the participants for their contributions over the 3 days. She encouraged the participants to provide feedbacks on the SCOPIC outlook products to FMS and the project team will try to customise them to meet the users' needs as far as possible.

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**EVALUATION REPORT**

*Stakeholders Workshop on Application of Climate Predictions (Fiji)*

Introduction

An evaluation was done for the 3-day workshop held at the Government Training Centre, Suva from 16<sup>th</sup> to 18<sup>th</sup> March 2005. The main purpose was to ensure that the objectives of the workshop were met and to measure the success of the project.

Evaluation Form

The form consisted of eight sections with rating ranging from strongly agree (5) to strongly disagree (1). The five workshop sessions and training handout were evaluated with an overall assessment.

The workshop sessions were:

- Climate System, its Behaviour and Consequence;
- Seasonal Climate Forecasting;
- Managing Climate Risks;
- The Forecasting and Decision Making Exercise; and
- Climate Outlook Forum.

The participants were asked to rate the above sessions by its contents (its usefulness and relevance), time allocation, the structure of the presentations, and its effectiveness. The contents and the amount of materials provided in the handouts were rated.

Participants also had a chance to comment on each presenter: how well the presenter do and how could he/she improve.

Finally, there was a section on overall assessment: most valuable aspect; least valuable aspect, venue, entire workshop and any additional comments.

Results

Twenty-one people registered on the first day of the workshop but the number dropped slightly from the next day. This was mainly due to some people been called back to work. The following results are summarised from 16 forms.

The average rating for each workshop session ranged from 4.4 to 4.6 (out of 5). The lowest rating was given to “*the time allocation*” for every session (as low as 4.1). The highest average rating of 4.8 was given to “*the relevance of Managing Climate Risks session*”. Training handouts also scored an average of 4.6. The participants rated the three presenters from *good* to *excellent*.

Most participants found the *Forecasting and Decision Making Exercise* as the most valuable aspect of the workshop. There was no session that was rated as least valuable.

The overall rating:

Venue: excellent (4); very good (6); good (6).

Workshop: excellent (11); very good (4); good (1).

Some notable comments/recommendations made by the participants:

- Has allowed me to pursue new avenues in my job.
- More frequent workshops on similar subject to be conducted in all divisions.
- Don't use yellow text on a white background for presentations.
- Good to get feedback at end of each day or session.
- Wonderful 3 days of vigorous learning and memory jogging. A good selection of participants as well, lots of interaction and information exchange.
- More workshops or interactions with Met officers.
- Request to project rate for recharge in a particular area using SCOPIC.

Further comments

Once again, the team noted that there was some variation in qualification/skills among the participants, but they had some understanding of application of climate information in decision making in their respective sector. Like the previous workshops, project team engaged the met staff in doing several presentations to build their capacity to rely this information to the others.

All the slides have been revised and font colours have been changed accordingly.

All presenters had a chance to read the evaluation forms. Once again, they noted the comments/criticism (if any). The presentations (including format and contents) and their form of delivery are continually revised. Though there are a set of generic training materials, the presentations are modified (if need be) for each Pacific Island Country.

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***Stakeholders' Workshop on Application of Climate Predictions***

***Government Training Centre, Nasese, Suva  
16<sup>th</sup> to 18<sup>th</sup> March 2005***

**AGENDA**

**Wednesday**

Formal Opening: Chaired by the Director of the Fiji Meteorological Service, Mr Rajendra Prasad

Opening Ceremony

- 8.30            Opening Prayer: Isireli Tawake, Commissioner Western Office  
                  Welcome remark: Mr Prasad
- 8.45            Opening address by Ms Stacey Tennant, Second Secretary, AusAID
- 9.00            Introduction of the Project Team  
                  Introduction of the PI-CPP project and the Workshop: Janita Pahalad
- 9.15            Brief self introduction of the participants
- 9.30            *MORNING TEA*

Session Two: The Climate System, its behaviour and consequences

- 10.00          Background on the climate system including key process (small scale/large scale variability): David Walland, BOM
- 10.45          Local climatology (eg seasonal variation, ENSO teleconnections including some of the past events and tropical cyclones): Riteshni Lata, FMS

Session Three: Seasonal Climate Forecasting

- 11.15          Seasonal climate forecasts: what makes it possible, processes, what do they tell us and their limitations: David Walland, BOM
- 11.45          Seasonal Climate Outlook for the Pacific Island Countries (SCOPIIC): What user products are available?: Yahya Abawi, QDPI and Ravind Kumar, FMS
- 12:30          *LUNCH*

Session Four: Managing Climate Risks (case studies)

- 13.30          Local case study: Naca Yalimaitoga, Fiji Pine Ltd
- 14.00          Agricultural: Yahya Abawi
- 14.45          *AFTERNOON TEA*
- 15.15          Water management: Yahya Abawi
- 16.00          *END OF DAY*

## **Thursday**

### Session Five: THE FORECASTING AND DECISION-MAKING EXERCISE

- 8:30 Regional and Local Seasonal Forecast Products: what's available regionally and locally; dynamic models: David Walland, BOM
- 8.50 Briefing on F&D-M Exercise  
Presentation of 1<sup>st</sup> 3-month rainfall outlook and ENSO outlook  
Group session  
Presentation "what actually happened"  
Brief report from each group
- 10.30 *MORNING TEA*
- 11.00 Presentation of 2<sup>nd</sup> 3-month rainfall outlook and ENSO outlook  
Group session  
Presentation "what actually happened"  
Brief report from each group
- 12.30 *LUNCH*
- 13.30 Presentation of 3<sup>rd</sup> 3-month rainfall outlook and ENSO outlook  
Group session  
Presentation "what actually happened"  
Brief report from each group
- 15.00 *AFTERNOON TEA*
- 15.30 Lessons Learned from the F&D-M Exercise
- 16.30 *END OF DAY 2*

## **Friday**

- 8.30 Presentation on RANET: Janita Pahalad

### Session Six:

- 9.00 CLIMATE OUTLOOK FORUM  
Presentation of the following 3-month rainfall outlook: FMS  
Round-table discussion
- 10.00 *MORNING TEA*
- 10.30 Recommendations and the next steps (Wrap-up): how to establish an effective communication channel/ service delivery channels; software modification specification.
- 12.00 *WRAP UP (followed by lunch)*

2<sup>nd</sup> STAKEHOLDERS TRAINING WORKSHOP ON SEASONAL CLIMATE  
PREDICTION SERVICE,FIJI

MARCH 16-18<sup>th</sup>, 2005.

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