

**ASPAC-II/20/Report**



**Food and Agriculture  
Organization of the  
United Nations**



# **Report of the Second meeting of the Pacific Soil Laboratory Network (ASPAC)**

Virtual meeting, 29 October 2020

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 2020

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## Introduction

The Second meeting of the Pacific Soil Laboratory Network (ASPAC) was held online in two sessions on 29 October 2020. The first session (Pacific laboratories training workshop) was predominantly dedicated to laboratories from Pacifica with 16 participants from 8 countries and included 7 members of the ASPAC executive. The list of participants is available in Annex I.

The Australasian Soil & Plant Analysis Council is a legal entity incorporated association under the Victorian Associations Incorporation Act since 1990 and governed by an executive committee (Reps from each state of Australia, New Zealand and now Pacifica. The second session later in the day was the required ASPAC Annual General Meeting.

In its constitution Australasia is defined as Australia, New Zealand, and neighbouring countries of S.E. Asia and the South Pacific. Since the establishment of SEALNET and the participation of SE Asian laboratories in that network, ASPAC has focused more on assistance to Pacifica. ASPAC has sub-committees to deliver on ASPAC activities such as the Inter laboratory Proficiency Program (ILPP), developing and improving analytical methods, liaising and supporting the fertilizer industry through the Fertcare Committee, providing training opportunities and sponsoring students attendance at conferences with Travel Awards. Corporate members pay annual fees that go towards supporting these activities as well as sponsoring laboratories, research, and a part time executive officer.

## Highlights and conclusions

### Pacific Laboratories Training Workshop

Unfortunately, issues with connection with some countries and a clash with national initiatives restricted the ability to reach all expected participants. The agenda can be found in Annex II.

From the presentation and evaluation of the results of the Pacific labs performance in the 2020 ASPAC ILPP it was noted:

- Not all laboratories participated in every round due to
  - Closure of laboratory due to Covid-19 restrictions
  - Changes in biosecurity requirements for the import of soil samples
- Improvement in performance with several methods but still work to be done
- Reindorsement of “*Soil Chemical Methods – Australasia*” as the method reference

Following two sessions were dedicated to training on “Verification and Validation of Analytical Methods” presented by Graham Lancaster of Environmental Analytical Laboratory at Southern Cross University and “Internal Quality Control” presented by Rob De Hayr, Chemistry Centre, Qld Department of Environment and Science. Ms Nopmanee Suvannang (Chair GLOSOLAN) reported on the activities and achievements of GLOSOLAN in 2020.

### Status of participating laboratories

As participants from the Pacific Island nations were given the opportunity to present their laboratory at last years meeting, only Leocadie Jamet from Laboratoire des Moyens Analytiques, IRD, Nouméa who was unable to attend in 2019 presented with a focus on the analyses they perform (type, number and equipment used), the number of staff and some highlights of new methods introduced and how they handled the Covid-19 restrictions.

## Regional work plan

Due to time constraints and connection issues with some countries, discussion on regional priorities for work in soil laboratories in the coming year was unable to be undertaken and all participants agreed to report back on priority issues to be addressed out of session.

## ASPAC Annual General Meeting

This meeting was held on-line on 29 October 2020. The meeting included the election of executive members representing the states of Australia, New Zealand and this year a representative for the Pacific nations. Reports were given on the activities of the committees:

### Laboratory Proficiency Committee Report

- Covid-19 disruption meant the annual meetings in Hamilton, NZ did not occur
- Recommendation of the LPC to renew the contract with the provider Global Proficiency for another 3-year term was passed
- Launched the Physical Soil Test Program
- Three tests: Particle size (silt, sand, clay), Available Water Capacity (1/3 bar moisture) and Permanent Wilting Point (15 bar moisture)
- First round successful, with 16 Participants. Reasonable performance, especially for a first round of an ILCP

### Methods Committee Report

- Development of a plant tissue grinder contamination testing protocol.
- A digestion procedure to reduce plant material testing contamination from soil Al and Fe when washing is insufficient or time consuming.
- CO<sub>2</sub> outgassing mitigation during FIA analysis of bi-carbonate P extracts via a simple and innovative back pressure technique.
- Effect of inter-laboratory method variations in colorimetric P determinations of soil, including colloidal particle or ester presence, reagent composition and extractant pH
- Spectroscopy (NIR/MIR) – discussions on the formation of a regional working group and user groups and the co-ordination of national and regional projects has started. Regional workshop proposed for 10 December 2020

### ASPAC - Fercare Committee Report

- Conducted a survey of ASPAC labs for soil and plant tissue testing sample numbers.
- ASPAC reviewed and endorsed the Fercare soil sampling guide.
- ASPAC provided advice on the list of compulsory ASPAC certified methods for Fercare accredited labs:
- Added Phosphorus Buffer Index (PBI).
- Retained Exchangeable K as a compulsory requirement, without modification to allow either Colwell K or Exchangeable K.

### Training Committee

- 2-days plant and soil analysis training workshop was held in Lismore at Environmental Analysis Laboratory (EAL) with 24 attendees.
- 2020 workshop was to be held on 13th – 15th May CSIRO Analytical Chemistry Group -Agriculture and Food in Canberra cancelled due to Covid-19

- Pacific Laboratories Training Workshop was held on-line 29 October
- Considering delivering training through on-line webinars

#### **Travel awards**

- Targeted to the Soils Science conference in Cairns, July 2021. Have also received funding to support participants from Pacifica.
- The Plant Trust accepted 6 grants this year

## Venue and time of the next meeting

The third ASPAC laboratory managers meeting will be organized for October 2021. Venue and time to be confirmed. Attendance at the ASPAC/SSA Conference in Cairns (postponed to 27 June – 2 July 2021) will be a major goal for all laboratories. Support has been received from the Australian Centre for International Agricultural Research (ACIAR) for Pacific Island attendance.

## Annex I. List of participants

Rob De Hayr	ASPAC <a href="mailto:Rob.dehayr@des.qld.gov.au">Rob.dehayr@des.qld.gov.au</a>	Queensland
Chris Gendle	ASPAC Vice Chair <a href="mailto:Chris.Gendle@csbp.com.au">Chris.Gendle@csbp.com.au</a>	Western Australia
Graham Lancaster	ASPAC <a href="mailto:Graham.Lancaster@scu.edu.au">Graham.Lancaster@scu.edu.au</a>	New South Wales
Matthew Wheal	ASPAC Secretary <a href="mailto:matthew.wheal@awri.com.au">matthew.wheal@awri.com.au</a>	South Australia
Nell Peisley	ASPAC <a href="mailto:Nell.Peisley@csiro.au">Nell.Peisley@csiro.au</a>	Australian Capital Territory
Paul Kennelly	ASPAC Chair <a href="mailto:Paul.Kennelly@incitecpivot.com.au">Paul.Kennelly@incitecpivot.com.au</a>	Victoria
Stephanie Cameron	ASPAC Newsletter Editor <a href="mailto:Stephanie.C@eastwestonline.com.au">Stephanie.C@eastwestonline.com.au</a>	New South Wales
Nopmanee Suvvanang	GLOSOLAN Chair <a href="mailto:nopmanee_su@hotmail.com">nopmanee_su@hotmail.com</a>	Thailand
Md. Abdul Kader	University of the South Pacific <a href="mailto:mdabdul.kader@usp.ac.fj">mdabdul.kader@usp.ac.fj</a>	Alafua Campus, Samoa
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Mohammad Golabi	University of Guam <a href="mailto:mgolabi@triton.uog.edu">mgolabi@triton.uog.edu</a>	Guam
Morris Oromu	National Agricultural Research Institute <a href="mailto:morris.oromu@nari.org.pg">morris.oromu@nari.org.pg</a>	Papua New Guinea
Vincent Lal	University of the South Pacific <a href="mailto:lal_v@usp.ac.fj">lal_v@usp.ac.fj</a>	Suva, Fiji





**Second meeting of the  
Pacific Laboratory Network (ASPAC)**

**29 October 2020**

- 8:00 – 8:30 AEST** | **Opening of the meeting**  
| **Tour de table**
- 8:30 – 9:15 AEST** | **Presentation and discussion of the results of Pacific labs in the ASPAC ILPP**  
**2020**  
  
*Rob De Hayr*
- 9:15 – 10:30 AEST** | **Verification and Validation of Analytical Methods**  
  
Reference document available at ....  
  
*Graham Lancaster, EAL*
- Break**
- 11:00 -12:00 AEST** | **Internal quality control**  
  
How to prepare and use internal quality control soil samples
- How to introduce internal QC samples in analytical batches
  - How to interpret the results of an internal QC: QC charts and development of estimates of Measurement of Uncertainty using a top down approach
  - How to take action in case of bad results
- Reference document available at ....  
  
*Rob De Hayr, GLOSOLAN Vice-Chair*
- 12:00 – 12:30 AEST** | **Global Soil Laboratory Network updates**

*Nopmanee Suvannang, GLOSOLAN Chair*

**12:30 – 13:00 AEST** | **Discussion on regional priorities in soil laboratories – formulation of requests and proposals**

**13:00 AEST** | **Closure of the meeting**