

# **Agreement for Performance of Work (APW)**

## **Terms of Reference:**

### **Implementation of physical and trace metal parameters for food and water testing at Fiji CDC**

This consultancy is requested by:

Unit:	Pacific Health Systems and Policy (PHS)
Division:	Division of Pacific Technical Support (DPS)

#### **1. Purpose of the Consultancy**

In collaboration with the Pacific Health Systems and Policy (PHS) and the Pacific Climate Change and Environment (PCE) team, the WHO Division of Pacific Technical Support (DPS) office and the government of Fiji, primarily the Ministry of Health & Medical Services (MoHMS), the consultant will develop an implementation and training plan for physical and trace metal parameters for Food and water testing at Fiji Centre for Disease Control (CDC).

#### **Background**

In Fiji, geographical, demographic and climatic factors, allied with lifestyle constitute a favourable environment for food and water outbreaks and its presence is confirmed by surveillance data. According to UNESCO, water quality is determined by the physical, chemical, and microbiological properties of water. These water quality characteristics throughout the world are characterized by wide variability. Therefore, the quality of natural water sources used for different purposes should be established in terms of the specific water-quality parameters that most affect the possible use of water.

WHO's special initiative on climate change and health in small island developing states launched during the COP23 meeting chaired by Fiji calls for the acceleration of actions towards mitigating the impact of climate change and building climate resilient health systems.

The WHO DPS, PHS and PCE teams have committed to advancing this progress and have proven their strong adherence with achieving Universal Health Coverage (UHC), health-related SDGs as climate resilience requiring multidisciplinary approaches not only in the health sector but also communities and society.

With a primary focus on climate resilience, the team is to support Fiji MOHMS in strengthening its leadership and coordination in climate change and health policy, enhancing laboratory capacity and surveillance network, and community engagement for climate resilience.

The Korea International Cooperation Agency (KOICA) provided financial support under the project Strengthening Health Adaptation Project (SHAPE): Responding to Climate Change in Fiji.

The general objective of the project is to ensure that physical and trace metal parameters for Food and water testing is established at Fiji CDC and staff are well trained to conduct this test. The specific objectives are:

1. Prepare the implementation plan on the phases of activity to be carried out, including the budget component for each activity.
2. Assist in finalizing the laboratory equipment and consumables which will be used in commencing the testing within the given physical and trace parameters provided. **(Annex 1)**
3. To thoroughly plan out and implement the setup of the physical and trace parameters to commence testing once established.
4. To develop and implement physical and trace parameters testing training package and implement the training and capacity building to upskill laboratory scientific officers within the given time frame.
5. Staff are trained on all procedures adequately and well versed with the standard operating procedures.
6. To develop the Standard Operating Procedure (SOP)/policies that will be used for the testing procedures.
7. To develop a roadmap towards accreditation of the food and water laboratory testing facility in compliance with ISO standards.
8. Submit reports and updates to the Laboratory manager.

The work required in this ToR is very important in the whole process of the Ministry's approach to responding to climate-sensitive diseases. The work requires knowledge of the Ministry of Health and Medical Service structure, policies, and plans regarding Health Emergency and Climate Change and an understanding of the climate change impact and associated disease outbreaks occurring in Fiji.

#### **Planned timelines**

**Start date: 01/04/2025**

**End date: 31/10/2025**

The institute will be engaged for 6 months within the period of **01/04/2025 to 31/10/2025**

The details are as follows:

The development of physical and trace metal parameters for food and water testing implementation will involve:

- Assembling and analysing relevant laboratory reagents and consumables that will guide and inform the development of the implementation plan and this includes current testing capability at National Public Health Laboratory Fiji CDC.
- Communicating with focal laboratory person at Fiji CDC.

- Developing a plan to be used by MoHMS for implementation of physical and trace metal parameters for Food and water testing and sustainability.
- Meeting stakeholders who are also involved in this area of work. (University of the South Pacific, Water Authority and Koronivia laboratory).
- Plan for capacity building of further training enhancement of laboratory personnel from Fiji CDC.
- Finalizing report for submission.

## **2. Work to be performed**

### **Method(s) to carry out the activity**

Under the supervision of the Head of Health Protection Unit, Suva, Fiji, and the Laboratory Officer, WHO, the institute will carry out the following activities:

1. The institute will prepare and submit a workplan that includes a training and implementation plan, including the budget component to carry out all objectives.
2. The institute will train relevant Fiji CDC laboratory staff on proper techniques for physical and trace metal parameters for the food and water testing procedures.
3. The institute will develop new standard operating procedures to align with the current ISO standards.
4. The institute will prepare a report on recommendations and lessons learned, which will be submitted to the Laboratory manager.

### **Output/s**

#### **Output 1: The workplan includes workflow, testing and reporting of all procedures involving physical and trace metal parameters for Food and Water testing.**

Deliverable 1.1: Assessment of the equipment, reagents, and consumables needed for the implementation.

Deliverable 1.2: Develop SOP/policies which will be used for the testing procedure.

Deliverable 1.3: To develop a roadmap towards accreditation of the food and water laboratory testing facility in compliance with ISO standards.

#### **Output 2: Training Laboratory staff**

Deliverable 2.1: Lectures and training tool developed.

Deliverable 2.2: Hands-on training to laboratory staff.

Deliverable 2.3: To train laboratory staff on quality assurance, biosafety, and biosecurity relevant to the pathogen and the disease concerned.

#### **Output 3: Networking with other Reference laboratories.**

Deliverable 3.1: To establish and maintain a network with other Reference Laboratories designated for physical and trace parameters and organise regular inter-laboratory proficiency testing to ensure comparability of results.

#### **Output 4: Submitted finalized consultancy report.**

Deliverable 4.1: Finalized plan for sustainability.

Deliverable 4.2: Final report on recommendation and lessons learned (including phase 2 for capacity building).

### 3. Technical Supervision

The institute will work under the supervision of:

Responsible Officer:	Dr Jun Gao, Team Coordinator, World Health Organization.	Email	<a href="mailto:gaoj@who.int">gaoj@who.int</a>
Fiji CDC Focal:	Dr Daniel Faktaufon acting, Head of Health Protection, MoHMS	Email	<a href="mailto:dbfaktaufon@gmail.com">dbfaktaufon@gmail.com</a>

### 4. Specific requirements

- Qualifications required:

Advanced degree in Laboratory Science, public health, or health sciences.

Experience required:

At least five years of experience in setting up outbreak-prone disease testing platforms which include food and water testing.

Skills /Technical skills and knowledge:

- Specific technical knowledge on food and water testing. Demonstrated writing skills to prepare technical plans and excellent communication skills.
- Language requirements:  
Expert level of written and spoken English is required.

### 5. Competencies

- Culturally sensitive.
- Communicating in a credible and effective way; and
- Producing results.

### 6. Place of assignment

The institute is expected to work in the Fiji CDC laboratory.

### 7. Medical clearance

The selected institute's consultant will be expected to provide a medical certificate of fitness for work.

### 8. Travel

The consultant is expected to travel for this consultancy:

<b>Travel dates</b>	<b>Location:</b>
<b>TBC</b>	Fiji CDC Laboratory
<b>Purpose:</b>	Implementation of physical and trace metal parameters for Food and water testing at Fiji CDC

## **9. Payment Schedule**

- Signing of contract
- Submission of workplan and deliverables under Output 1 – 30%
- Submission of deliverables under Output 2 and 3 – 50%
- Submission of deliverables under Output 4 – 20%

### Annex 1: (Physical and Trace parameters)

No.	Parameter	Analytical Method ref	No	Parameters	Analytical Method Ref
1	Organoleptic		1	Ca	
2	Turbidity		2	Mg	
3	Color		3	K	
4	pH		4	Cu	
5	Conductivity		5	Zn	
6	Salinity		6	Fe	
7	Dissolved Oxygen		7	Mn	
8	Temperature		8	Pb	
9	Total Suspended Solids		9	Cd	
10	Total Dissolved Solids		10	Cr	
11	Brix		11	Ar	
12	Moisture		12	Tn	
13	Histamine				
14	Foreign Matter				