Australian Government
Australian Radiation Protection and Nuclear Safety Agency

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ARPANSA's Marshall Islands Fish Monitoring Program

Marcus Grzechnik & Liesel Green

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ARPANSA-IAEA-Marshall Islands Collaboration

ARPANSA's Marshall Islands Fish Monitoring Program

Capacity Building in Australasia – Collaborations and Future Possibilities

Liesel Green & Marcus Grzechnik

IAEA Project – Developing a National Radioactivity Monitoring Capacity

The Marshallese Government requested the assistance of IAEA for developing capacity for:

- Environmental radioactivity monitoring
- Radiation dose assessments
- Provision of public information

Status of Ongoing TC Programme 2020-2021

- Building Core Capacities to Control Contaminants and Other Residues in Food — Phase I

MHL5002

- Improving the Quality of Radiology Services ***(Pending Closure)***

MHL6001

- Improving the Quality of Clinical Services in Radiology - Phase II (2018-21)

MHL6002

- Developing a National Radioactivity Monitoring Capacity ***(Pending Closure)***

MHL7001

- Establishing Technical Capabilities for Groundwater Resources Management ***(Pending Closure)***

MHL7002

- Developing National Radioactivity Monitoring Capacity - Phase II (2018-21)

MHL7003

- Strengthening the National Infrastructure for Radiation Safety (2018-21)

MHL9004

Source IAEA, 2021

Training Program - MHL 7003 Phase II

Aim: Build on the IAEA training conducted in 2017

ARPANSA Training 1: 2-5 March 2021

- Radiation Protection in Marshall Islands (Existing exposure situation)
- Monitoring Strategy
- Radiation and application to Dose
- Environmental Sampling Techniques
- Gamma Spectrometry
- Laboratory Quality System

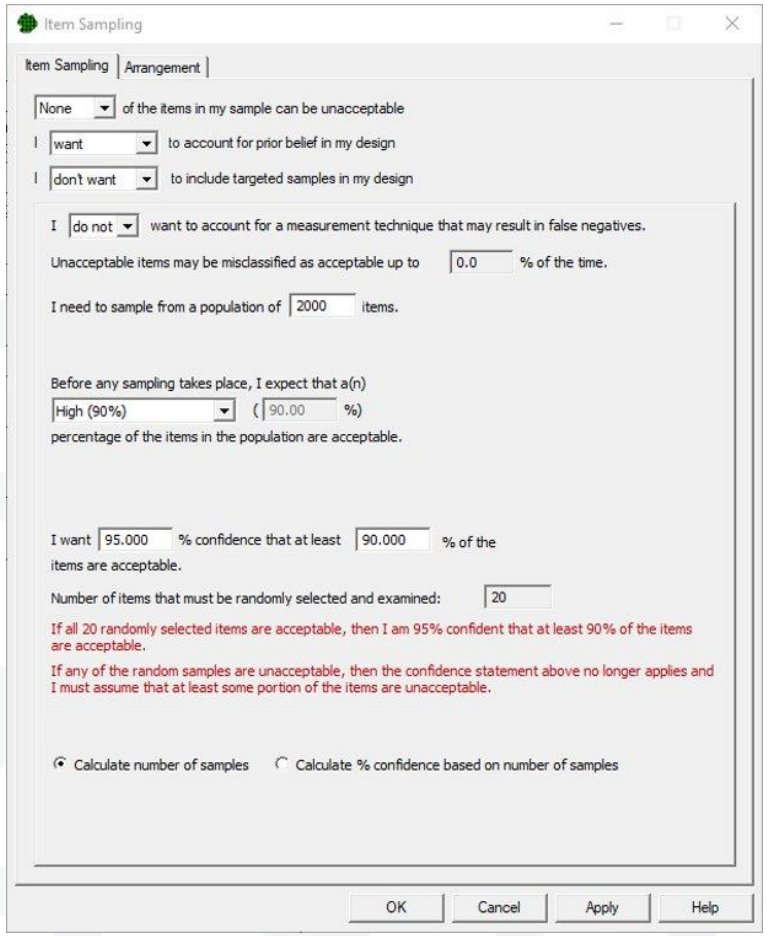
Training Program - MHL 7003 Phase II

ARPANSA Training 2: 21-23 September 2021

- Radioecology
- Dose Calculations
- Seawater Measurements for Radiocaesium
- Exposure due to Radionuclides in Food
- Visual Sample Plan - Item Sampling, Fish Sampling
- Stakeholder Engagement and Communication Planning

- Fish Market Monitoring Program

  Draft project documents



Fish Market Monitoring

ARPANSA is providing assistance and capacity building in the development of a project plan that can be expanded to other environmental assessments conducted by Marshall Islands Marine Resource Authority (MIMRA) and the Marshall Islands EPA

- Development of strategy
- Sample and analysis considerations
- Logistics - local conditions and shipping samples to ARPANSA
- Information and data management
- Public information

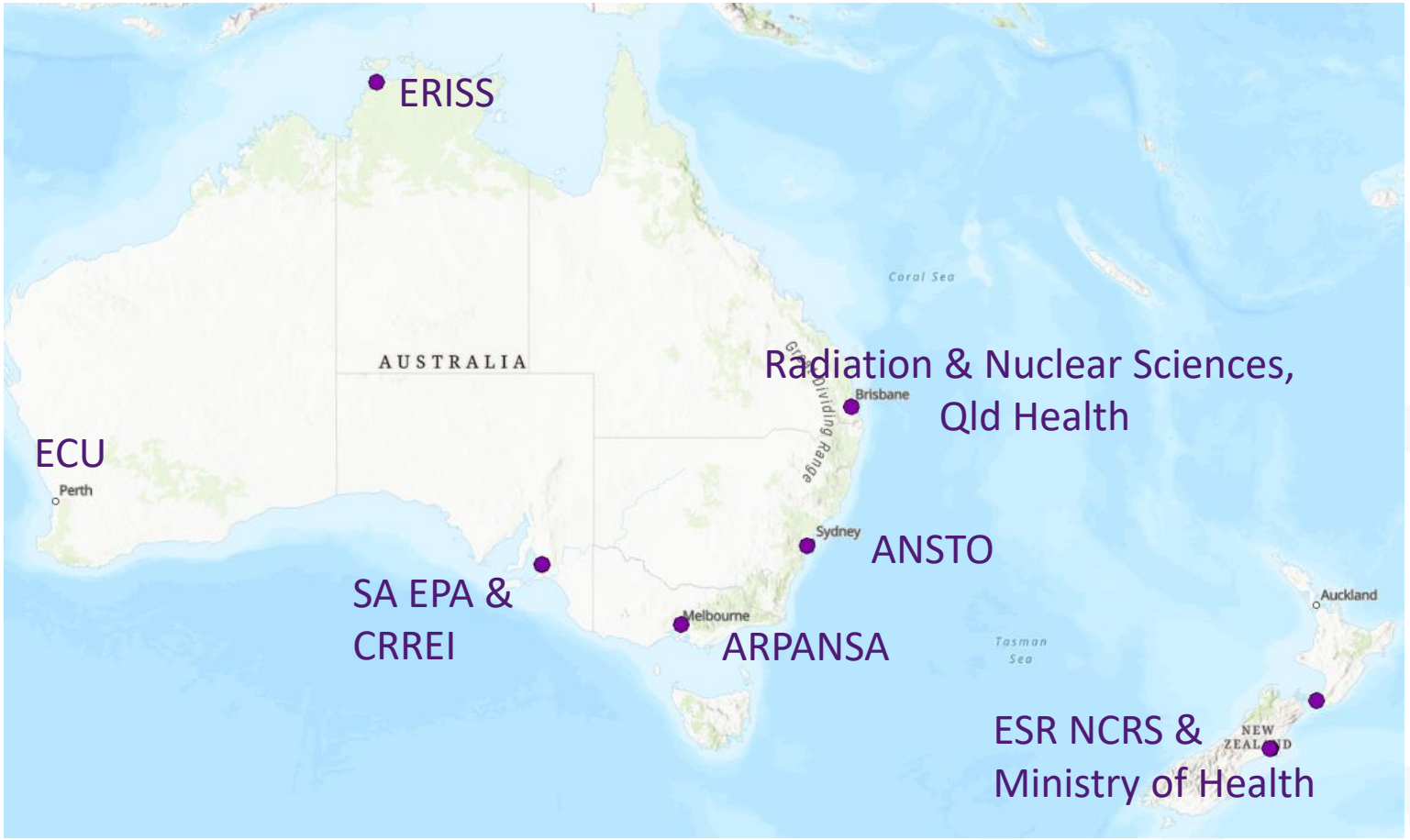
Fish Market Monitoring (cont.)

- Expertise of staff in MIMRA and the Marshall Islands EPA to develop target species and sampling procedures
- Build on the Marshall Islands EPA methods developed during the TCP
- ARPANSA to provide support to both documenting and developing the program
- ARPANSA to provide support through:
  - *Verification of screening measurements conducted by MIMRA/EPA laboratories*
  - *Additional analysis of samples for Pu and Po at ARPANSA*

Target species	kūro, jilo, Paan, merã, kupañ, Orange spine unicorn fish and Humpback red snapper
Target radionuclides	$^{239+240}$Pu, ^{241}Pu, ^{241}Am, ^{137}Cs and ^{90}Sr and ^{210}Po, ^{210}Pb

ARLN

Australasian Radioanalytical Laboratory Network



National capacity building activities

Gamma spectrometry capability exercise
2013 – 2015 – 2018 – 2021

Gross alpha & gross beta capability exercise
2020 - ongoing

Is there scope for further expansion and increased activities?

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THANK YOU

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