Australian Government

Australian Radiation Protection and Nuclear Safety Agency

arpansa

AUSRNEPLAN

Australian Government Radiological and Nuclear Events Plan

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1. Acronyms

ABF	Australian Border Force
AGCMF	Australian Government Crisis Management Framework
AMSA	Australian Maritime Safety Authority
ANNPSR	Australian Naval Nuclear Power Safety Regulator
ANSTO	Australian Nuclear Science and Technology Organisation
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
ARPANS Act	*Australian Radiation Protection and Nuclear Safety Act 1998*
ARLN	Australasian Radioanalytical Laboratory Network
ARWA	Australian Radioactive Waste Agency
ASA	Australian Submarine Agency
ASNO	Australian Safeguards and Non-Proliferation Office
AUSRIAPLAN	*Interim* Australian Government Reception of International Assistance Plan
AUSRNEPLAN	Australian Government Radiological and Nuclear Events Plan
BFSN	Bi-national Food Safety Network
CAC	Crisis Arrangements Committee
CASP	Crisis Appreciation and Strategic Planning
CEO	Chief Executive Officer of ARPANSA (includes an official appointed as Acting CEO)
COMDISPLAN	Australian Government Disaster Response Plan
DACC	Defence Assistance to the Civil Community
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DFAT	Department of Foreign Affairs and Trade
DFAT CC	Department of Foreign Affairs and Trade Crisis Centre
DFRA	Disaster Recovery Funding Arrangements
DHDA	Department of Health, Disability and Ageing
DSS	Department of Social Services
FSANZ	Food Standards Australia New Zealand
GA	Geoscience Australia
GIS	Geographic Information System
GSR	General Safety Requirements
GWO	Global Watch Office
IAEA	International Atomic Energy Agency
IDETF	Inter-Departmental Emergency Task Force
INES	International Nuclear and Radiological Event Scale
JATWC	Joint Australian Tsunami Warning Centre

IND	Improvised Nuclear Device
LO	Liaison Officer
mSv	millisieverts
MOU	Memorandum of Understanding
NCM	National Coordination Mechanism
NCTP	National Counter Terrorism Plan
NPV	Nuclear-Powered Vessel
NPW	Nuclear-Powered Warship
NEMA	National Emergency Management Agency
NGO	Non-Governmental Organisation
NIC	National Incident Centre
NJCOP	National Joint Common Operating Picture
NMS	National Medical Stockpile
NORM	Naturally occurring radioactive materials
NPP	Nuclear Power Plant
NPV	Nuclear-Powered Vessel
NPW	Nuclear-Powered Warship
NSC	National Security Committee
NSR	Australian Government National Situation Room
OPSMAN 1	Defence Operations Manual
PM&C	Department of the Prime Minister and Cabinet
RECC	Radiation Emergency Coordination Centre
RDD	Radiological Dispersal Device
REMPAN	Radiation Emergency Medical Preparedness and Assistance Network
RED	Radiological Exposure Device
RFA	Request for Assistance
RHC	Radiation Health Committee
RPS	Radiation Protection Series
SOP	Standard Operating Procedure
SITREP	Situation Report
UK	United Kingdom
USA	United States of America
WHO	World Health Organization

2. Definitions

Active	A phase under AUSRNEPLAN where a radiological or nuclear emergency is happening, and agencies are responding.
Alert	A phase under AUSRNEPLAN where a radiological or nuclear emergency has emerged, and agencies are preparing to respond to the emergency.
Australian Government Coordinating Agency	The agency required to lead the coordination across the Australian Government for a significant crisis (or concurrent crises with converging consequences) caused by one or more identified hazards under the AGCMF. This agency also leads the consequence management activities within its agency functions and sector-specific responsibilities.
Australian Government Radiological and Nuclear Events Plan	Outlines the process the Australian Government may use to coordinate during, and communicate in preparation for, a radiological or nuclear emergency.
Crisis Appreciation and Strategic Planning	The Crisis Appreciation and Strategic Planning (CASP) methodology is a structured, systematic methodology that uses strategic and critical thinking and conceptualises the big picture in crisis planning. It supports practitioners to manage challenges including concurrent events, consequences of uncertainty and complexity. It can be used by Australian, state and territory governments to conduct strategic planning and informs crisis decision-making at all levels.
Early recovery	Early recovery refers to temporary, near-term measures that support anticipated community needs, such as transitional shelter, services and supplies. During early recovery, the restoration of critical infrastructure would also be underway. This may occur alongside operational response and relief efforts.
Enabling Agency	An Australian Government agency that administers relevant programs, provides specialist technical, scientific, intelligence or information capabilities, service delivery, or conducts any other enabling activities to support consequence management activities.
***Interim* Australian Government Communication Guidelines**	Provides guidance on coordinating whole-of-Australian Government crisis communication, including development and dissemination of talking points, media holding lines and response strategies for media management and collaboration with state and territory operations centres.
Lead Coordinating Senior Official	The designated senior official within an Australian Government Coordinating Agency who is responsible for leading the coordination for a significant crisis (or concurrent crises with converging consequences).
Lead Minister	The Australian Government minister responsible for leading coordination in response to a significant crisis (or concurrent crises with converging consequences) caused by one or more identified hazards under the AGCMF.
millisievert (mSv)	A millisievert (mSv) is a unit of measurement for radiation dose including the effective dose received by the human body. It is a standard unit used internationally, with 1 mSv equivalent to one-thousandth of a sievert (Sv). Millisieverts are commonly used to express radiation exposure from medical procedures, background radiation and nuclear accidents.
Nuclear-Powered Vessel	Commercial or private vessel powered by a nuclear reactor, as distinguishable from a warship.

Nuclear-Powered Warship	Military vessel powered by a nuclear reactor.
Phase	A phase identifies the action being taken by the Australian Government Coordinating Agency under the plan and allows other Agencies to understand the level of activity being conducted to resolve the emergency
Preparedness	Arrangements to ensure that, should a crisis occur, the required resources, capabilities and services can be efficiently mobilised and deployed.
Radiation Emergency Coordination Centre	ARPANSA's emergency response centre that coordinates national responses to radiological or nuclear emergencies.
Relief	Meeting the essential needs of food, water, shelter, energy, communications and medicines for people affected by a crisis event.
Response	Immediate actions taken to ensure that crisis impacts and consequences are minimised, and that those affected are supported as quickly as possible.
Sector Lead Agency	An Australian Government agency that contributes to whole-of-Australian Government crisis coordination activities and leads the consequence management activities relevant to agency functions and sector-specific responsibilities.
Significant Radiological or Nuclear Emergency	Under AUSRNEPLAN, a non-routine situation (incident or accident) or event that necessitates prompt action, primarily to mitigate a hazard or adverse consequences for human health and safety, quality of life, property and the environment.
Standby	The default phase under AUSRNEPLAN where agencies are ready to handle radiological or nuclear emergencies. Preparedness activities also take place at this level.
Watching	The phase under AUSRNEPLAN where a potential radiological or nuclear emergency has been identified, requiring more information and analysis.

3. Authorising Environment

3.1. Authority

The Australian Government Radiological and Nuclear Events Plan (AUSRNEPLAN) derives its authority from the Australian Government Crisis Management Framework (AGCMF). The AGCMF outlines the arrangements enabling the Australian Government's 'all hazards' crisis management approach.

AUSRNEPLAN is prepared and maintained by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). It outlines the process the Australian Government would use to coordinate during and in preparation for a significant radiological or nuclear emergency. AUSRNEPLAN supersedes the *Interim* AUSRNEPLAN.

The Minister for Health, Disability and Ageing oversees AUSRNEPLAN arrangements.

AUSRNEPLAN is approved by the Chief Executive Officer of ARPANSA.

3.2. Review and Amendments

Recommendations for amendments or suggestions for improvement may be forwarded to:

Australian Radiation Protection and Nuclear Safety Agency
AUSRNEPLAN@arpansa.gov.au

3.3. Version Details

Version #	Date of Issue	Brief description of change
1.0	20 April 2026	AUSRNEPLAN created

4. Introduction

4.1. Purpose

A radiological or nuclear emergency may result in the release of ionising radiation or radioactive material due to an accident, a malicious act, or another unexpected event, and require immediate action to prevent or minimise harm.

Radiological or nuclear emergencies can arise from events involving a range of situations and facilities including nuclear reactors, on nuclear-powered warships (NPW) or nuclear-powered vessels (NPV), in medical and industrial facilities using radioactive sources, during the transport or waste management of radioactive materials, or resulting from malicious acts. Annex A outlines a range of radiological and nuclear scenarios that may occur.

Nuclear or radiological emergencies are rare but can disrupt services, supply chains and have an impact on community health. Major events with airborne radioactive releases can have severe consequences, affecting critical services, health responses, and causing long-term impacts on food, water, mental health, the environment, the local economy and infrastructure. Recovery may take decades.

The AGCMF is the Australian Government's capstone policy framing Australia's national crisis management arrangements. The AGCMF is underpinned by a range of national plans that set out hazard-specific crisis management arrangements. AUSRNEPLAN is the national plan that outlines the process the Australian Government would use in preparation for or during a significant radiological or nuclear emergency.

AUSRNEPLAN outlines the Australian Government mechanisms and coordination arrangements for various Australian Government agencies in supporting preparedness, response and early recovery efforts for a radiological or nuclear emergency that requires a whole-of-Australian-Government response. It facilitates effective crisis management, accountability, and transparency by:

- designating crisis management functions
- identifying key decision-makers
- establishing information and data flow arrangements
- detailing crisis management mechanisms and capabilities.

Australia's states and territories are the first responders to incidents that occur within their jurisdictions. States and territories are responsible for crisis management at the jurisdictional level, including preparedness, response, relief and recovery.

ARPANSA and the Australian Government does not seek to replicate the capabilities of states and territories. However, the Australian Government possesses strategic and operational capabilities, that could include monitoring radiological spread, assisting with the treatment of casualties, or communicating with the public, that can ensure decisive action is taken during significant crises.

4.2. Scope

AUSRNEPLAN addresses significant radiological or nuclear emergencies that impact human health, safety, and the environment, requiring protective actions[1] and other response actions including:

- airborne radioactive releases over Australia from domestic or international nuclear facilities, including NPVs or NPWs
- emergencies in Australia, including its offshore territories[2], involving radioactive material that develops over time
- radioactive material release from re-entry of space debris
- international radiological or nuclear emergencies affecting Australian citizens or interests.

4.3. Out of Scope

AUSRNEPLAN does not override existing crisis response plans maintained by jurisdictions.

AUSRNEPLAN does not outline arrangements for domestic terrorist incidents. Under the AGCMF, responsibility for coordinating a whole-of-Australian Government response to a domestic terrorist incident rest with Home Affairs. ARPANSA would become an Enabling Agency should an incident include nuclear or radiological elements.

Additionally, AUSRNEPLAN does not supersede existing memorandums of understanding (MOUs), agreements, or interstate sharing arrangements between jurisdictions, other Australian Government agencies or commercial entities.

Chemical, biological, radiological or nuclear incidents which impact or may impact Australian citizens or national interests overseas are considered an international crisis and are therefore covered by the Department of Foreign Affairs and Trade's (DFAT) International Crisis Management Framework.

4.4. Hierarchy of documents

AUSRNEPLAN is supported by sub-sector operational plans that outline the operational requirements, responsibilities, and governance arrangements for responding to radiological or nuclear incidents. These plans are maintained by the relevant portfolio agencies and are aligned with AUSRNEPLAN.

Page 9 of the AGCMF outlines the hierarchy of documents that underpin the Australian Government's crisis management arrangements, detailing how the Framework, AUSRNEPLAN,

[1] As outlined in Section 5.2.2 of the Radiation Protective Series G-3 Part 2, protective actions for emergencies involving radiation exposure can be categorised into *urgent* and *early*. Urgent protective actions include evacuation, sheltering, iodine thyroid blocking, restrictions imposed on food, milk, drinking water and non-food commodities. Early protective actions include relocation and long-term restrictions on food, milk and drinking water. The national reference level of 50 mSv is consistent with the generic criteria that are applied for protective actions, as defined in Section 2.6.1 of the Radiation Protection Series G-3 Part 1.
[2] Australia's external and mainland non-self-governing territories include Norfolk, Jervis Bay Territory and the Indian Ocean Territories (administered by DITRDCA) and the Australian Antarctic Territory (administered by DCCEEW).

sub-sector operational plans and supporting standard operating procedures (SOPs) and templates align to ensure consistent and coordinated responses.

4.5. Principles to radiological and nuclear emergency management

AUSRNEPLAN is underpinned by the following international best practice principles to assist decision-makers in navigating priorities in time-limited and challenging situations.

All responses to a radiological or nuclear emergency should contribute to:

- saving lives and reducing harm
- protecting the environment
- protecting property and safeguarding national interests and assets
- providing national leadership and maintaining public trust and confidence
- national capability and sharing prioritisation
- continual improvement.

Diagram 1: Principles to assist decision-makers in navigating priorities in time-limited and challenging situations.

Additionally, AUSRNEPLAN will:

- recognise Australia's states and territories as the first responders to radiological or nuclear emergencies
- promote unity of effort across Australian Government, state and territory governments, local governments, civil society and the private sector
- acknowledge community at the core of response and recovery and the consideration of the needs of Australians who may be disproportionately at risk of harm
- acknowledge the importance of recognising and engaging with First Nations people and their communities before, during and after crises
- support near-term crisis planning and preparedness, immediate crisis response and early recovery arrangements for radiological or nuclear emergencies that impact Australians and Australian interests, domestically and internationally

- adopt a scalable and adaptable operational model that supports a coordinated approach across domestic and international radiological or nuclear emergencies.

4.6. National reference level

In addition, AUSRNEPLAN aims to promote, where relevant, ARPANSA's *Guide for Radiation Protection in Emergency Exposure Situations – Radiation Protection Series (RPS) G-3 Part 1 and Part 2*.[3] These Guides capture international best practice including the International Atomic Energy Agency (IAEA) General Safety Requirements (GSR) Part 7, *Preparedness and Response for a Nuclear or Radiological Emergency.*

As detailed in *RPS G-3 Part 1 clauses 2.6.1,* Australia uses a national reference level of 50 mSv effective dose during a radiation emergency. This value serves as a benchmark for optimisation of protection and safety, and planned actions to avoid or minimise severe tissue reactions. This reference level includes dose contributions via all exposure pathways. These pathways can include inhalation, ingestion and direct or external exposure.

This reference level reflects that receiving more than 50mSv during an emergency would be unacceptable[4] as this is the same upper annual limit set for occupationally exposed radiation workers. While doses below 50 mSv may be tolerated in an emergency context, they remain undesirable.

This national reference level works alongside the generic criteria in *RPS G-3* to guide jurisdictions when protective actions should be taken. It helps inform their decision making such as when to declare an emergency and what response measure to activate, as detailed across *RPS G-3 Part 1 and Part 2* (including *clauses 3.1.27-3.1.31* and *Annexes A and B*). The generic criteria *Annex B* of *Part 2* provide the basis for implementing protective and other response actions.

It is important to note that radiation doses, including the national reference level do not determine Australian Government coordination arrangements in the event of a radiological or nuclear emergency under AUSRNEPLAN.

4.7. Approach to radiological and nuclear emergency management

The following elements frame ARPANSA's approach to managing radiological or nuclear emergencies:

- promoting uniform radiation protection and nuclear safety policies across Australian Government, state and territory jurisdictions
- where appropriate, applying international best practice to nuclear and radiological emergency management
- an understanding of the Australian Government Crisis Management Continuum, recognising its phases are not necessarily linear and frequently overlap
- the use of a scalable and adaptable radiological and nuclear emergency response model that supports a coordinated approach proportional to the severity and complexity of the emergency and its consequences

[3] Radiation Protection Series G-3 | ARPANSA
[4] This value may be exceeded for lifesaving measures as outlined in *RPS G-3 Part 1*

- applying the Australian Government's 4-tier crisis coordination model to ensure coordination and decision-making remain appropriately scaled and responsive to the evolving severity, complexity, and consequences of a radiological or nuclear emergency
- maintaining continuous improvement at all levels of radiological and nuclear emergency management to embed lessons from past emergencies and exercises into overarching nuclear or radiological emergency plans and response arrangements.

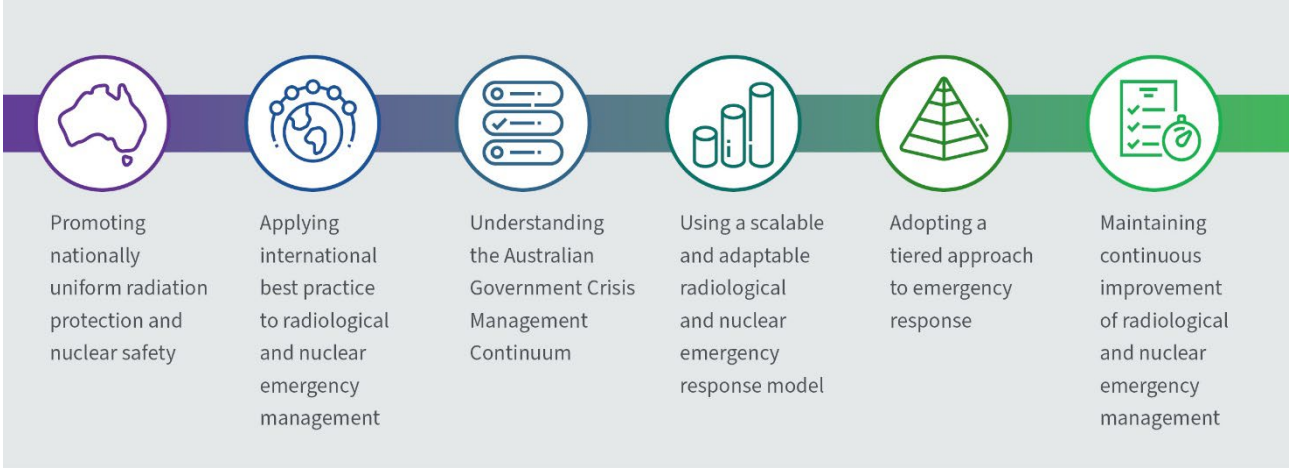

Diagram 2: Elements that frame ARPANSA's approach to managing radiological or nuclear emergencies.

Jurisdictions' capability to respond to radiological and nuclear incidents and Australian Government engagement

Operators and jurisdictions are required to respond to radiological and nuclear incidents and emergencies. Their capacity for response may be defined by the specific risks associated with their facilities and sites in the case of operators, and by territorial boundaries in the case of jurisdictions.

For example, the Australian Nuclear Science and Technology Organisation (ANSTO) maintains response plans and capabilities for incidents and emergencies occurring within its facilities and onsite. Jurisdictional agencies such as NSW Police, Fire and Rescue NSW and the NSW Department of Health have established procedures and plans for managing offsite emergencies.

The Australian Government also maintains access to specialised radiological and nuclear emergency capabilities that can complement jurisdictional response when needed. These capabilities, such as technical expertise and tools like the Geospatial Information System (GIS) Portal for real-time information sharing, provide additional support that jurisdictions may not hold or may be unable to develop independently. Jurisdictions may also collaborate with one another to strengthen their response capacity, including in areas such as policing, monitoring, and detection during radiological or nuclear events.

5. Roles and Responsibilities

During a significant nuclear or radiological emergency, clarity of roles and responsibilities is crucial for ensuring that an Australian Government response is effective and sustains community trust.

Under AUSRNEPLAN, ministers, senior officials and their agencies have clear responsibilities to ensure Australian Government coordination and response activities are well-aligned and responsive as the impacts and consequences of the crisis evolves.

This section of AUSRNEPLAN articulates the roles and responsibilities of the:

- Lead Minister
- Australian Government Coordinating Agency
- Lead Coordinating Senior Official
- Enabling Agencies.

Specific details of these roles and responsibilities can be viewed in the AGCMF.

During an event requiring Tier 4 Australian Government crisis coordination, the National Emergency Management Agency (NEMA) is the Australian Government Coordinating Agency and ARPANSA will assume the role of Sector Lead Agency to conduct sector-specific responses and consequence management activities within its portfolio.

5.1. A 4-tier model for crisis coordination

The Australian Government uses a 4-tier approach to guide and support appropriate and consistent levels of coordination in response to crises. There is no standardised response to crises. Every crisis is unique and will present different challenges. As the nature of a crisis changes over time, the Australian Government must shift and adapt its coordination in accordance with the severity and complexity of the impacts and consequences.

Diagram 3 outlines the 4-tier crisis coordination model.

The Australian Government's 4-tier crisis coordination model helps Australian Government ministers and officials to consider the severity and complexity of a crisis, its impacts and consequences, and to:

- determine the appropriate crisis coordination and decision-making needs and the appropriate mechanisms to respond to these needs
- decide when to escalate or de-escalate the tier of crisis coordination
- manage responses to both a crisis and its consequences as they become clear
- adjust the coordination over time if required by evolving impacts and consequences, including the ability to change the Lead Minister and Australian Government Coordinating Agency.

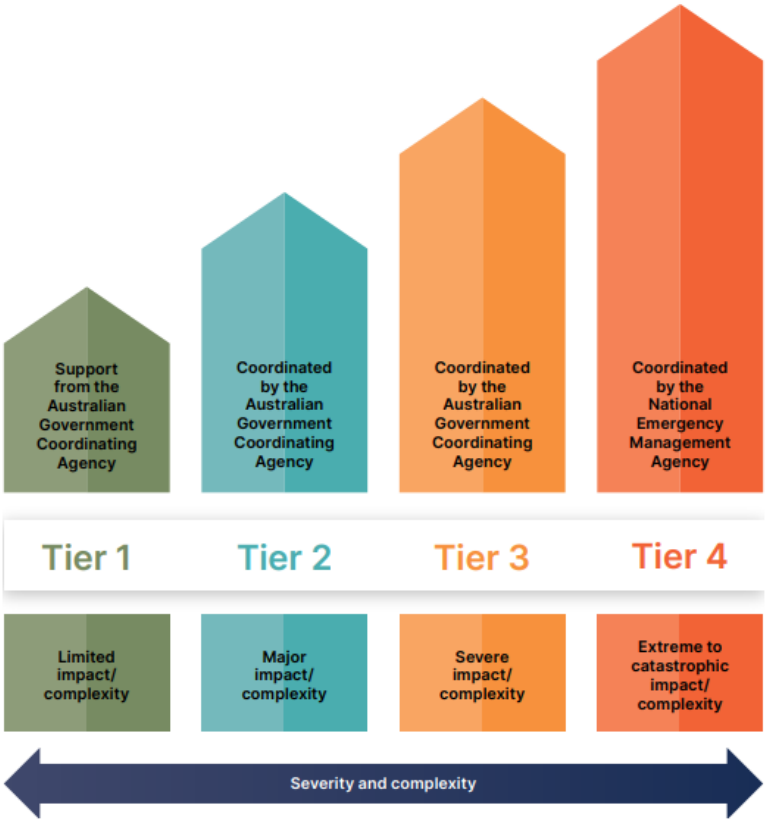

Diagram 3: The Australian Government 4-tier crisis coordination model.

Indicators to guide decision-making on the appropriate coordination tier required to support a radiological or nuclear emergency response

The Australian Government's 4-tier crisis coordination model helps Australian Government ministers and officials to consider the severity and complexity of a crisis, its impacts and consequences, and to determine the appropriate crisis coordination and decision-making needs and the mechanisms required to meet them, decide when escalation or de-escalation of the coordination tier is warranted, manage the response to both the crisis and its emerging consequences, and adjust coordination arrangements over time as impacts evolve—including, where necessary, changing the Lead Minister and the Australian Government Coordinating Agency.

Example: A small release of radiological material from a nuclear-powered AUKUS submarine

The severity and complexity of a crisis will influence the scale of coordination required and, along with other situation specific factors, will influence which tier of coordination is appropriate. For example, a small release of radiological material from an AUKUS nuclear-powered submarine, in a regulated Australian Naval Nuclear Power Safety Regulator (ANNPSR) designated zone may have no potential for radiological health effects related to the incident - that is there may be a limited number of people involved and minimal safety significance. Such an event may be initially assessed as below the threshold requiring significant Australian Government coordination. However, the incident may generate significant attention from the media or the community or both, where there is high public expectations of an Australian Government response. In this context, the Lead Senior Coordination Official takes into consideration all indicators to determine the level of

crisis coordination required across the Australian Government that might be needed to address community concerns.

In such circumstances, the Australian Government, through ARPANSA's leadership as the Australian Government Coordinating Agency with the Lead Senior Coordinating Official would be responsible for coordinating the whole-of-Australian Government crisis communications strategies and ensuring the dissemination of crisis communication products and public information with ANNPSR support. As Enabling and Sector Lead Agencies in this scenario, the Australian Submarine Agency (ASA) and the Department of Defence would effectively manage nuclear-powered submarine and designated zone (i.e. HMAS *Stirling*) radiological material release.

5.2. Lead Minister

Under the AGCMF, the Minister responsible for Health is the **Lead Minister** for radiological or nuclear emergencies (Tier 1 to 3). Upon notification of a significant emergency by the Lead Coordinating Senior Official (CEO of ARPANSA or the Chief Radiation Health Scientist of ARPANSA or an official appointed to Act in either role), the **Lead Minister**:

- advises the Prime Minister and National Security Committee (NSC) of Cabinet on whole-of-Australian Government crisis priorities and consequence management objectives
- oversees a coordinated Australian Government response to crisis and coordinates ministerial activities by collaborating with other Australian state and territory counterparts
- exercises executive responsibilities and decision-making in consultation with Australian Government ministers with relevant interests to ensure there are systems and procedures available and they are readily contactable
- ensures their office maintains business continuity plans
- acts as the key government spokesperson in alignment with a whole-of-Australian Government crisis communications strategy
- records ministerial decisions and actions relevant to the crisis.

Should a nuclear or radiological crisis require Tier 4 coordination as defined by the AGCMF, the Prime Minister will become the Lead Minister. The Prime Minister may choose to delegate the role or some responsibilities to other ministers.

5.3. Australian Government Coordinating Agency

Under AUSRNEPLAN, ARPANSA is the **Australian Government Coordinating Agency** (Tier 1 to 3) and is required to lead the coordination across the Australian Government for a radiological or nuclear emergency. As the **Australian Government Coordinating Agency**, ARPANSA:

- monitors crises and emergencies that may impact the interests and responsibilities of agencies across the Australian Government
- supports the Lead Coordinating Senior Official in making decisions and recommendations on the level of coordination and response required
- harnesses capabilities and resources in line with coordination requirements from within the portfolio, and from other agencies when portfolio-managed options are insufficient
- provides secretariat and convening functions for sector-specific committees

- supports development and coordination of a whole-of-Australian Government crisis communications strategy and ensures the dissemination of crisis communications products and public information (such as whole-of-Australian Government talking points and briefing materials)
- as crisis coordination concludes, supports the transfer of any continuing functions and responsibilities to relevant officials and agencies (including state and territory leads) and recovery coordination mechanisms
- conducts post-response evaluation and supports integration of relevant lessons identified into the continuous improvement of the Australian Government's crisis management arrangements, including plans and capabilities
- when a crisis occurs in an Australian External Territory, work with the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA) and other relevant stakeholders to coordinate crisis management
- requests liaison officers from relevant agencies such as the NSR, DFAT Crisis Centre (DFAT CC) or other operations centres, including jurisdiction operations centres, as required by the RECC to support situational awareness
- engages with counterparts in states, territories and/or international jurisdictions, and as required, coordinates with responsible agencies including NEMA and DFAT
- maintains business continuity plans to ensure the agency can continue to perform its role if it is affected directly by a crisis
- maintains records of decisions and actions relevant to the crisis.

Escalation of a nuclear or radiological emergency to a NEMA-coordinated Tier 4 response (or Tier 3 by request) may be decided through agreement between ARPANSA and NEMA Lead Coordinating Senior Officials, by a senior officials' crisis coordination committee, or by PM&C in consultation with the relevant Lead Coordinating Senior Official.

5.4. Lead Coordinating Senior Official

The **Lead Coordinating Senior Official** (Tier 1 to 3) during a radiological or nuclear emergency is the CEO of ARPANSA or the Chief Radiation Health Scientist of ARPANSA or an official appointed to Act in either role. The **Lead Coordinating Senior Official**:

- ensures that ARPANSA (the Australian Government Coordinating Agency designated under the AGCMF) is prepared and positioned to coordinate Australian Government actions in response to a crisis or crises caused by a radiological or nuclear emergency
- advises and supports the Lead Minister (Minister responsible for Health) in executing the Lead Minister's responsibilities
- where the Lead Minister is the Prime Minister (Tier 4), advises and supports the Prime Minister through PM&C
- assesses the level of crisis coordination required, and establishes reviews and adapts the appropriate tier of coordination over the course of the crisis
- maintains near real-time situational awareness and monitors impacts and consequences of the crisis across all sectors, including awareness of Australian Government agencies' capacity to coordinate response efforts

- facilitates shared situational awareness across the Australian Government and nationally
- facilitates agreement to whole-of-Australian Government coordination priorities and objectives
- ensures coordination of cross-government advice to relevant ministers
- engages and collaborates with counterparts in Sector Lead Agencies and Enabling Agencies to ensure compliance with the requirements under the AGCMF
- regularly convenes an overarching senior officials' coordination forum during a crisis in collaboration with the senior official responsible for the relevant forum
- in line with chairing arrangements, co-chairs the peak senior official's crisis coordination committee and briefs NSC (or other Committee of Cabinet) as required
- maintains clear lines of communication with the Lead Minister's office
- coordinates development of a whole-of-Australian Government crisis communications strategy and ensures the dissemination of crisis communications products and public information (such as whole-of-Australian Government talking points and briefing materials)
- coordinates strategic planning activities
- maintains oversight of any requests for or offers of assistance received by Australian Government agencies from state, territory or foreign governments, coordinating with responsible agencies, including DFAT and NEMA
- manages risks related to crisis coordination
- engages with counterparts in states, territories and/or international jurisdictions as required, coordinating with responsible agencies including DFAT and NEMA
- as crisis coordination concludes, ensures transfer of any ongoing responsibilities and processes to relevant senior officials, agencies (including jurisdiction leads) and recovery coordination mechanisms
- conducts post-response evaluation and supports integration of relevant lessons identified into the continuous improvement of the Australian Government's crisis management arrangements, including plans and capabilities
- maintains records of decisions and actions relevant to the crisis.

As the nature of a crisis changes over time, the Australian Government may shift and adapt coordination arrangements in accordance with the severity and complexity of the crisis. If a nuclear or radiological emergency is determined to be a crisis requiring Tier 4 coordination under the AGCMF, the Lead Coordinating Senior Official will transition to the Deputy Coordinator General, Emergency Management and Response Group, NEMA.

5.5. Sector Lead Agencies

A **Sector Lead Agency** is an Australian Government agency that contributes to whole-of-Australian Government crisis coordination activities and leads the consequence management activities relevant to agency functions and sector-specific responsibilities. Sector Lead Agencies and their responsibilities are outlined below.

Sector Lead Agency	Responsibilities
Department of Defence	• Provision of a rapidly deployable and uniquely capable force, able to assist with domestic and international disaster relief under existing arrangements. • Responds to ARPANSA requests under the Defence Assistance to the Civil Community (DACC) Policy. • Deploys relevant officers, if required, to the RECC. • Head of Navy Engineering and Chair of the Visiting Ships Panel (Nuclear) to provide specific advice upon an incident or emergency on an NPW visiting an Australian Port.
Department of Foreign Affairs and Trade (DFAT)	• Leads international crisis response. • Facilitates coordination requests, offers and responses for international assistance related to domestic radiological or nuclear emergencies. • Deploys relevant officers, if required, to the RECC.
Department of Health, Disability and Ageing (DHDA)	• Coordinates national health sector responses to radiological or nuclear emergencies with significant adverse consequences for the health of Australians, health systems, or federally managed health services or assets. • Deploys health capabilities and resources in line with response requirements (including but not limited to the National Medical Stockpile (NMS)).
Department of Home Affairs and the Australian Border Force (ABF)	• Manages the impacts of cyber security threats, critical infrastructure resilience and malicious disruptions to supply chains. • Administer and provide advice on operational and policy matters relevant to the *National Emergency Declaration Act 2020,* alongside NEMA and PM&C. • Facilitates the movement of people and goods across the international border, including specialist teams and equipment required to respond to a radiological or nuclear event.
National Emergency Management Agency (NEMA)	• Coordinates Australian Government response to space debris re-entry in accordance with the Australian Government Space Re-entry Debris Plan 2025 (AUSSPREDPLAN). • Provision of whole-of-Australian Government (cross sectoral) emergency response coordination for radiological or nuclear emergencies that meet the threshold of a Tier 4 response (or a Tier 3 response if requested by ARPANSA). • Supports ARPANSA on emergency matters, especially on state/territory intersection and Disaster Recovery Funding Arrangements (DRFA). • Deploys relevant liaison officers, if required, to the RECC. • Maintains national situational awareness via the Australian Government National Situation Room (NSR) and National Joint Common Operating Picture (NJCOP). • Provision of secretariat and management of National Coordination Mechanism (NCM) meeting that supports responses for national radiological or nuclear emergencies. • Facilitates Australian Government non-financial assistance to affected states and territories according to arrangements set

Sector Lead Agency	Responsibilities
	out in the Australian Government Disaster Response Plan (COMDISPLAN).

5.6. Enabling Agencies

An **Enabling Agency** is an Australian Government agency that:

- administers relevant programs
- provides specialist technical, scientific, intelligence or information capabilities
- supports or conducts any other enabling activities, including service delivery, to support consequence management activities
- deploys liaison officers to the NSR, DFAT CC or other operations centres as required to support shared situational awareness
- proactively contributes to the whole-of-Australian Government crisis communications strategy, dissemination of crisis communications products and public information (such as whole-of-Australian Government talking points and briefing materials)
- engages with counterparts in states, territories and/or international jurisdictions as required, coordinating with responsible agencies including NEMA and DFAT
- maintains business continuity plans to ensure the agency can continue to perform its role if it is affected directly by a crisis
- maintains records of decisions and actions relevant to the crisis.

Under AUSRNEPLAN, Enabling Agencies can be extended to, but not limited to:

Enabling Agency	Responsibilities
Australian Maritime Safety Agency (AMSA)	• Maintains the National Plan for Maritime Environmental Emergencies.
Australian Naval Nuclear Power Safety Regulator (ANNPSR)	• ANNPSR provides specific advice upon an incident or emergency involving an ANNPSR regulated nuclear activity in a designated zone (i.e. HMAS *Stirling*) or involving an AUKUS nuclear-powered submarine. • Separate to advice provided during an incident or emergency, ANNPSR also licenses, monitors and enforces regulated activities associated with naval nuclear propulsion in Australia's Nuclear-Powered Submarine Program.
Australian Nuclear Science and Technology Organisation (ANSTO)	• Supports whole-of-Australian Government through technical advice and deployment related to radiation and nuclear preparedness, response and early recovery activities. • Maintains plans related to Australia's nuclear research program.
Australian Radioactive Waste Agency (ARWA)	• Supports whole-of-Australian Government through technical advice and deployment related to radiation waste

Enabling Agency	Responsibilities
	management preparedness, response and early recovery activities.
Australian Safeguards and Non-Proliferation Office (ASNO)	• Fulfills Australia's obligations to the IAEA under Australia's Comprehensive Safeguards Agreements and its Additional Protocol, including ensuring any nuclear material and nuclear facilities involved or impacted by any event are correctly reported to the IAEA. • Ensures appropriate arrangements are made to continue to meet Australia's obligations to facilitate inspection by the IAEA.
Australian Space Agency	• Provision of advice on tracking and mapping space debris re-entry, impact sites and areas/nature of risk as required and where possible.
Australian Submarine Agency	• Provision of technical advice and deployment in relation to radiation and nuclear preparedness, response and early recover activities, specific to Australia's conventionally armed nuclear-powered submarine capability. • Deploys relevant officers, if required, to the RECC.
The Bureau of Meteorology (BoM)	• Provision of meteorological and oceanographic data to ARPANSA to assist in modelling of a radiation or nuclear emergency. • Issues tsunami warnings on behalf of the JATWC.
Department of Agriculture, Fisheries and Forestry (DAFF)	• Provision of advice on DAFF's responsibilities in managing the risk of chemical residues, radiation exposure and environmental contaminants in food intended for international trade purposes. • Provision of advice on impacts to the agriculture sector and coordination with ARPANSA to produce nationally consistent public messaging across food and economic security impacts.
Department of Climate Change, Energy, the Environment and Water (DCCEEW)	• Environmental monitoring capability to detect uranium mining effects on people and the environment within the Office of the Supervising Scientist.

Department of Social Services (DSS)	• Can provide advice on available programs to support adversely affected people, families or communities.
	• Works closely with Services Australia on the delivery of payments.
	• Programs include:
	  ○ Emergency Relief Services – providing support to address the immediate needs in a time of crisis, For example, food vouchers and parcels, clothing, transport.
	  ○ Family Support Program – provides funding to NGO's to support families, particularly those who are vulnerable or living in disadvantaged communities.

Department of the Prime Minister and Cabinet (PM&C)	• Leads the development, maintenance, and oversight of whole-of-Australian-Government crisis management policy settings, including responsibility for the AGCMF and

Enabling Agency	Responsibilities
	Handbook, and provides advice to agencies on these arrangements. • Provides advice and support to the Prime Minister, including advice on key decision points such as recommending a National Emergency Declaration be made or convening of a Committee of Cabinet or National Cabinet. • Initiates an Australian Government response and determines the initial tier of coordination, adjusting the tier over time as required. • Determines the initial Australian Government Coordinating Agency and, following consultation with senior officials, may change the AGCA and the Lead Coordinating Senior Official. • Contributes to whole-of-government public communication. • Co-chairs senior officials' crisis coordination committees, including the NCM and/or the IDETF, as appropriate. • Initiates escalation to NEMA-led coordination where appropriate.
Food Standards Australia New Zealand (FSANZ)	• Coordinates the national food regulation system response under the National Food Incident Response Protocol, in collaboration with the Bi-national Food Safety Network (BFSN). The BFSN includes FSANZ, the Department of Health, Disability and Ageing, Australian Centre for Disease Control, state and territory food enforcement agencies, Department of Agriculture, Fisheries and Forestry and the New Zealand Ministry for Primary Industries.
Geoscience Australia (GA)	• Provides notifications to the Australian Government on when an earthquake has occurred at, or above, agreed thresholds (domestic and international events). • Supports the Australian Government with a technical capability to model the physical damage from blasts within Australia's central business districts.
Joint Australian Tsunami Warning Centre (JATWC) (operated by GA and the BoM)	• Provides 24-hour tsunami monitoring, assessment and warnings. • Sole authority for issuing tsunami waring information for Australia and offshore Territories.
Services Australia	• Supports community recovery. • Delivers government payments and services (such as recovery payments). • Delivers support services, such as mental health and social work. • Delivers health and disability services. • Joint efforts with state and territory governments to maintain essential services. • Operates a national call centre – an important vehicle for distributing emergency information to the public.

The establishment of the roles of Lead Minister, Australian Government Coordinating Agency and Lead Coordinating Senior Official under AUSRNEPLAN and the AGCMF do not displace the existing executive responsibilities of ministers and senior officials. During a crisis, ministers and senior officials retain their statutory powers, with agencies and officials continuing to report to their respective ministers. This applies across all tiers of crisis coordination.

5.7. State and territory government responsibilities

States and territories are the first responders to any incident that occurs within their jurisdiction. This includes responding to a radiological or nuclear emergency. State and territories have primary responsibility for the protection of life, property and the environment within the bounds of their jurisdiction.

In addition, it is the responsibility of the state and territory emergency response agencies to:

- maintain all-hazard radiation and nuclear emergency plans
- maintain all-hazard emergency response capability for a radiological or nuclear event within the bounds of their jurisdiction, including facilities, personnel and specialised equipment
- participate in regular Australian Government-led national exercises.

State and territory regulators are statutory members of the Radiation Health Committee (RHC), which helps promote a nationally uniform approach to radiation protection issues including radiological emergencies.

6. Response to a radiological or nuclear emergency

6.1. Overview

In the initial phases of a radiological or nuclear emergency, there may be ambiguity regarding the release of radioactive material. Specific monitoring is required to confirm such a release. Early responses will depend on predictive modelling to evaluate the dispersion of radioactive material.

The Australian Government's role is to quickly assess the situation and determine how it can support jurisdictions to resolve the emergency swiftly.

ARPANSA supports jurisdictions and the Australian Government by:

- providing a clear understanding of radiological material spread through the ARPANSA Geospatial Information System (GIS) Dashboard
- supplying technical, scientific, and health information to aid decision-making at jurisdiction and Australian Government levels
- delivering radiological and/or nuclear crisis communications (including public communication) in highly technical environments.

ARPANSA provides these services at the time of a radiological or nuclear emergency through the Radiation Emergency Coordination Centre (RECC). The RECC is a critical capability of ARPANSA's crisis management system, providing the capacity to monitor, analyse and coordinate whole-of-Australian Government responses to radiological or nuclear emergencies. The RECC is in a specially designed operation room at ARPANSA's office in Melbourne. Annex B provides a factsheet on the RECC capability.

6.2. Phases and Activities

Under AUSRNEPLAN, ARPANSA has established 4 phases that align with the levels of an emergency response plan in RPS G-3 Part 1. These phases inform Australian Government agencies about the assessment of an emerging radiological or nuclear event and help determine the appropriate activation of the RECC to manage the emergency.

ARPANSA has a 24/7 Incident Response Officer who monitors radiological and nuclear environments to identify potential emergencies. When an emergency is detected, the Incident Response Officer informs the Lead Coordinating Senior Official, who decides on the phase based on the information. The Lead Coordinating Senior Official may consult with ARPANSA specialists before determining the phase.

In the event of an international emergency, the Incident Response Officer would inform the Australian Government Global Watch Office. In the event of a domestic emergency, the Incident Response Officer would inform the National Situation Room.

The established phases activate ARPANSA's RECC under AUSRNEPLAN for specific actions. Phases can be activated independently, without progressing through each phase, depending on the emergency's scale and complexity.

Concurrency of emergencies and varying phases

Different events can have different phases concurrently. For example, AUSRNEPLAN might be on WATCHING for an emerging international emergency and ACTIVE for a domestic one.

AUSRNEPLAN phases are:

Phase	Characteristic
STANDBY	The default phase where agencies are ready to handle radiological or nuclear emergencies. Preparedness activities also take place at this phase.
WATCHING	The phase for a potential radiological or nuclear emergency, requiring enhanced preparedness activity seeking additional information and analysis.
ALERT	The phase where a radiological and nuclear emergency has emerged, and agencies are preparing to respond to the emergency.
ACTIVE	A radiological or nuclear emergency is happening, and agencies are responding.

STANDBY

AUSRNEPLAN is maintained in STANDBY phase.

Preparedness and consistency

Under the STANDBY phase, ARPANSA leads national preparedness activities for radiological or nuclear emergencies. These efforts involve continuous improvement of response capabilities across government levels. Key activities include capability analysis, risk assessments, equipment procurement, research, policy development, regulatory actions, training, and exercises to ensure officials and agencies are well-prepared to respond effectively.

Section 15 of the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act) details the responsibilities of the CEO, which include promoting consistent radiation protection and nuclear safety policies across Australian Government, state, and territory jurisdictions, as well as providing related advice.

This policy development and advice is supported by advisory bodies, operational committees, governance committees, working groups, strong mechanisms both legislated and formal, where ARPANSA engages nationally and internationally. Advisory bodies include:

- **Radiation Health and Safety Advisory Council** - The Radiation Health and Safety Advisory Council (the 'Council') advises the CEO on emerging issues and matters of major public concern relating to radiation protection and nuclear safety.
- **Radiation Health Committee** (RHC) **-** The role of the RHC is to advise the CEO and the Council on matters relating to radiation protection, including formulating draft national policies, codes and standards for consideration by the Australian Government, states and territories.
- **Nuclear Safety Committee (NSC)** - The role of the NSC is to advise the CEO and the Council on matters relating to nuclear safety and the safety of controlled facilities, including developing and assessing the effectiveness of standards, codes, practices and procedures.

Managing the Australian Government response

ARPANSA coordinates responses to radiological or nuclear emergencies for the Australian Government through its RECC. The RECC provides 24-hour radiation protection and nuclear

advice and deploys liaison officers as needed to support the jurisdiction, and the Australian Government, as required.

ARPANSA maintains business continuity plans to ensure it operates under the ARPANS Act. As an Australian Government Coordinating Agency or Sector Lead Agency, ARPANSA keeps records of decisions and actions during an emergency or crisis.

In case of an emergency, ARPANSA oversees Australia's commitments under the International Atomic Energy Agency (IAEA) Conventions: *Early Notification of a Nuclear Accident* and *Assistance in the Case of a Nuclear Accident or Radiological Emergency*. ARPANSA also acts as a World Health Organization (WHO) Collaborating Centre for Radiation Protection, and ARPANSA also manages the *Radiation Emergency Medical Preparedness and Assistance Network* (REMPAN) for Australia.

Additional preparedness activities undertaken by ARPANSA in the STANDBY phase include:

- conducting workforce planning to ensure that ARPANSA is equipped to successfully lead and coordinate a response effort under AUSRNEPLAN
- completing relevant training and conducting exercises in the use of AUSRNEPLAN (this includes exercising relevant sub-plans that sit under AUSRNEPLAN, laboratory-specific emergency scenarios such as high-throughput screening, contamination events, and inter-laboratory drills coordinated through the Australasian Radioanalytical Laboratory Network (ARLN))
- ongoing horizon scanning and monitoring of potential radiological or nuclear emergencies
- ensuring lessons identified from evaluation of past crises and exercises are considered when reviewing and improving AUSRNEPLAN and internal arrangements
- maintaining contact lists and protocols for notification of an Australian Government crisis response and convening crisis forums in close consultation with NEMA
- where required, pre-deployment of ARPANSA resources such as atmospheric monitoring, and environmental sampling.

AUSRNEPLAN reverts to STANDBY when other phases conclude.

WATCHING

WATCHING is the phase where a radiological and/or nuclear emergency may be emerging, or further information needs to be collected and analysed before determining whether to activate a whole-of-Australian-Government response. Enhanced preparedness measures may include ARPANSA forward deploying Australian Government resources to the location of a potential radiological or nuclear emergency to maintain near-time situation awareness, as well as maintaining 24/7 situational awareness and readiness at the RECC.

WATCHING of emerging or potential radiological or nuclear emergencies is informed by open-source and classified information and may include:

- direct communications, including communications from the public
- media monitoring
- intelligence
- notifications from other watch offices or emergency operations centres (such as the National Situation Room or the National Incident Centre)

- notifications from the IAEA or other countries.

WATCHING may also be used where an emergency has limited impact but could escalate to an emergency, or in time, may impact Australia's interests.

During this period, mitigation and protection strategies tailored to the specific characteristics of a potential radiological or nuclear emergency can be applied.[5]

Upon moving to the WATCHNG phase, the CEO of ARPANSA or the Chief Radiation Health Scientist, as Lead Coordinating Senior Official, will contact senior officials and other relevant Australian Government stakeholder to advise them of the emerging emergency and provide them with some level of situational awareness and briefings.

The ARPANSA Incident Response Officer may initiate the WATCHING phase.

ALERT

The ALERT phase is declared when the Lead Coordinating Senior Official, is notified of a potential radiological or nuclear emergency and the need for preparedness across the Australian Government, enabling jurisdictions and agencies to be notified and brought to an enhanced level of preparedness.

The Lead Coordinating Senior Official can authorise raising the phase to ALERT and may consider the following triggers:

- transition to ACTIVE phase is considered likely, or
- developing situation that requires pre-emptive measures to support enhanced readiness.

Under the ALERT phase, ARPANSA undertakes the following activities:

- activates the RECC and commences gaining information to understand the scale and severity of the potential radiological or nuclear emergency
- informs the following key stakeholders that AUSRNEPLAN has moved to ALERT phase:
    - Australian Government National Situation Room (NSR)
    - relevant agencies, including the Department of the Prime Minister and Cabinet (PM&C) and the Department of Health, Disability and Ageing (DHDA)
- maintain situational awareness for officials by providing notification of events through situation reports and updates to the National Situation Room (via nsr@nema.gov.au), National Incident Centre (NIC) (health.ops@health.gov.au) and the Global Watch Office (GWO) (GlobalWatchOffice@dfat.gov.au), if relevant
- brief relevant Australian Government ministers on the crisis as it unfolds
- consider thresholds and triggers that may indicate the requirement to convene a National Coordination Mechanism (NCM) to prepare for the event

[5] See 2.3 'Basic concepts of radiation protection, safety and security in emergency exposure situations' RPS G-3 Part 1.

- confirm the readiness, capabilities and capacity of Sector Lead Agencies, Enabling Agencies and affected states and territories to respond to a radiological or nuclear emergency
- conduct crisis planning, using the Crisis Appreciation and Strategic Planning (CASP) methodology.

Sector Lead and Enabling Agencies also have responsibilities during an ALERT phase to:

- monitor the situation and undertake contingency planning
- identify their capacity to support radioactive or nuclear emergency response operations and place elements on alert as required

DFAT will maintain contact with relevant Government/s through diplomatic channels on an international incident and provide information to ARPANSA where relevant.

ALERT phase reverts to STANDBY if the Lead Coordinating Senior Official has determined that there is no longer a threat of a radiological or nuclear emergency.

ACTIVE

Where a radioactive or nuclear emergency is imminent or has occurred, the Lead Coordinating Senior Official can authorise the activation of AUSRNEPLAN. Under ACTIVE the following activities are undertaken by ARPANSA:

- activate the RECC including establishing a crisis communications cell, in line with advice provided in the *Interim* Australian Government Crisis Communications Guidelines
- deploy an ARPANSA Liaison Officer/s (LO) to the affected jurisdiction and/or request other Australian Government agencies to deploy LOs to the RECC to lead public crisis communications activities and to facilitate coordination, collaboration, and communication between the Australian Government and affected jurisdictions
- advise appropriate stakeholders via email that AUSRNEPLAN has been activated, including the Minister for Health, Disability and Ageing, NSR (via nsr@nema.gov.au) and the NIC (health.ops@health.gov.au)
- brief relevant Australian Government ministers, including the Minister for Health, Disability and Ageing, on the crisis as it unfolds
- maintain near real-time situational awareness through deployed ARPANSA LO and the ARPANSA GIS Dashboard
- ensure situational awareness for officials by providing notification of events and updates to the NSR (via nsr@nema.gov.au) and the GWO, and the NCM
- convening and co-chairing an NCM, in collaboration with NEMA, to provide situational awareness and coordinate response efforts
- conduct a full crisis planning process using the CASP methodology, developing subsequent planning products to enable a uniform response for a domestic crisis
- coordinate movement of people and capabilities to or from Australia and across states and territories, in partnership with NEMA where relevant (including requests for Australian Government non-financial (physical) assistance and offers of international assistance)

- when an emergency occurs in an Australian External Territory, work with either the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA) or Department of Climate Change, Energy, the Environment and Water (DCCEEW) to coordinate the management of the radiological or nuclear emergency.[6]

Responsibilities of Sector Lead and Enabling Agencies during ACTIVE phase include:

- monitor crisis events that may impact their agency's interests and responsibilities
- engage with counterparts in states, territories and/or international jurisdictions as required.

DFAT will maintain contact with relevant Government/s through diplomatic channels on an international incident and provide information to ARPANSA where relevant.

6.3. Coordinating mechanisms

AUSRNEPLAN aligns with the overarching emergency coordination arrangements outlined in the AGCMF and supports responses across Australia's state and territory governments.

During a radiation or nuclear emergency, ARPANSA is responsible for coordinating cross-sectorial emergency response (excluding domestic terror incidents).

When this situation occurs, the following Australian Government arrangements and capabilities are used.

Radiation Emergency Coordination Centre (RECC)

The role of the RECC during the emergency is to:

- establish the Crisis Coordinator and the Incident Management Team
- provide senior officials with an accurate and unified picture of the emergency
- support decision-making by ministers and key decision-making bodies
- ensure consistent public messaging and information maintain public safety and trust in government institutions
- ensure ministerial directions are effectively implemented across government
- de-conflict government actions and support effective resource prioritisation
- provide situational awareness
- provide detailed technical information on the emergency to health experts.

Broadly the RECC leverages a variety of ARPANSA's capabilities supplying technical, scientific, and health information to aid decision-making at jurisdiction and Australian Government levels.

The RECC is supported by Australian Government agencies with expertise in radiological and nuclear policy, operations, and science including ASNO, ARWA and ANSTO.

[6] Australia's external and mainland non-self-governing territories include Norfolk Island, Jervis Bay Territory and the Indian Ocean Territories (administered by DITRDCA) and the Australian Antarctic Territory (administered by DCCEEW).

Annex B contains further details on the capabilities of the RECC.

National Coordination Mechanism (NCM)

The NCM is the peak senior official's crisis coordination mechanism that provides a national picture of crises to governments and stakeholders. It brings together representatives from Australian Government, state and territory governments, local government, industry and not-for-profit sectors immediately before, during, and after a crisis. The NCM's flexible, scalable approach facilitates problem definition, situational awareness and solution ownership for quick crisis resolution. It uses sector-based approach to promote collaboration between stakeholders with equities in the crisis, strengthening and formalising the existing relationships between governments, industry and civil society. During concurrent, compounding or complex crises, the NCM enables the harnessing of collective national capabilities to support communities.

The Lead Coordinating Senior Official may co-chair the NCM with NEMA. NCM participation is flexible, however by invitation only and depends on the organisation or individual equity in the crisis. Attendees can be from Australian, state, territory and local governments, industry or non-for-profit organisations. Those facing impacts, who have relevant knowledge and experience, or those who have a potential role in identifying and taking stabilising actions, may be asked to contribute. The NCM may be informed by subsidiary sector-specific coordination forums or crisis coordination nodes.

The role of the NCM under AUSRNEPLAN includes:

- facilitating whole-of-Australian Government coordination and decision-making
- facilitating discussion of a whole-of-Australian Government strategic intent and agreed-upon tasks
- maintaining near real-time shared situational awareness, including discussion of current impacts
- clarifying priorities to ensure community safety and stable systems
- informing crisis communication strategy, including products and cadence
- ensuring national leadership and the maintenance of public trust in government systems
- directly engaging with industry and not-for-profit sectors in alignment with strategic intent and agreed tasks
- recording, distributing, and tracking agreed actions.

Mechanism to support decision-making during a radiological or nuclear emergency

Australian Government ministers and officials use various mechanisms to coordinate crisis responses. These bring together stakeholders to ensure a unified approach within the government, between governments, and with industry based on expert advice. ARPANSA will establish mechanisms as needed. Ministerial decisions may be supported by the NSC, the National Cabinet, or other forums chosen by the Prime Minister to meet the crisis requirements.

Diagram 4 outlines the possible mechanisms to support decision-making in a radiological or nuclear emergency where ARPANSA is the Australian Government Coordinating Agency or the Sector Lead Agency.

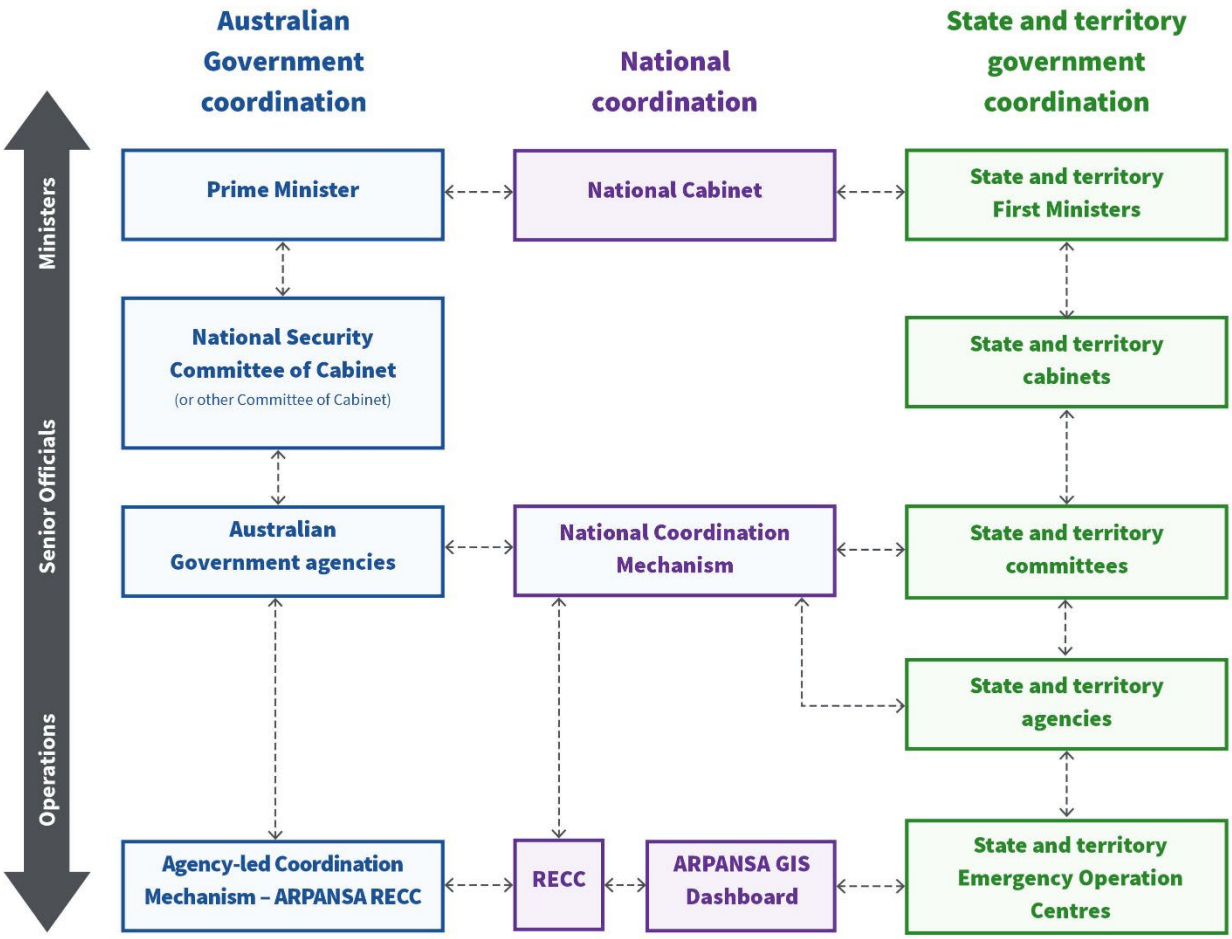

Diagram 4: Possible mechanisms to support decision-making in a radiological or nuclear emergency.

Crisis Communication and Public Information

To ensure consistent messaging across government during AUSRNEPLAN activations, ARPANSA is responsible for coordinating whole-of-Australian Government key messages and public communication for Tier 1, 2 or 3 emergencies.

A crisis communication cell will be established within the RECC to prioritise and coordinate messages, including public safety messages and whole-of-Australian Government talking points.

It should be anticipated that almost any radiological or nuclear emergency is likely to be high-profile, highly reported, and liable to cause public concern. Miscommunication in these circumstances has a range of potential consequences including panic and risks to life, property and the environment through poorly executed safety messaging and public information during and after a crisis.

Agencies involved in the response will be requested to provide lead communications staff to form part of the crisis communication cell. Agencies are responsible for providing timely and accurate information related to their responsibilities to support prompt updates and dissemination of crisis communication products.

In response to a domestic crisis, the crisis communication cell will engage across governments, and with industry and stakeholders such as media outlets, to ensure information is provided to the

public in a timely manner, thereby supporting safety messages and maintenance of public trust in crisis management systems. The crisis communication cell will also identify key government spokespeople and establish a daily tempo of public information updates.

The crisis communication cell will be responsible for:

- developing a whole-of-Australian Government crisis communications strategy
- coordinating crisis communications key messages and products with relevant states and territories
- determining products, channel and cadence of updates
- confirming key spokespeople and tempo of engagement
- liaising with media and public information officers across government, and other stakeholders including media outlets as required
- anticipating and resolving communication risks, including misinformation and disinformation
- incorporating and prioritising coordinated and consistent key messages across government, including public safety messages
- adjusting communications as the event, the media cycle and community needs evolve
- disseminating crisis communication products across the Australian Government, state and territory governments, industry and other stakeholders as required or deemed relevant
- supporting other areas of government that are organising media conferences
- supporting PM&C, the Prime Minister's Office and any other ministers on any crisis communication requirements.

The state or territory jurisdiction will remain responsible for crisis communications regarding its emergency response, including evacuation, shelter-in-place, and health orders. The RECC will coordinate with the relevant jurisdiction to ensure smooth flow of information and consistent public messaging.

Where possible, ARPANSA and the Australian Government should also amplify jurisdictional safety messaging and broader public information. Sector and Enabling Agencies are all responsible for monitoring for, advising of, and where appropriate, countering mis and disinformation in collaboration with ARPANSA.

In a crisis requiring Tier 4 coordination, NEMA will be the designated Australian Government Coordinating Agency. It will set up a crisis communication cell, which will include personnel from ARPANSA, the RECC and other agencies if required.

The ARPANSA Liaison Officer

In an emergency, ARPANSA LOs play a key role in facilitating communication between the jurisdiction and the Australian Government. They ensure clarity in the communication chain within Australian Government situation rooms. The ARPANSA LO:

- ensures that the RECC understands what is occurring at the jurisdiction level, through written and/or verbal situation reports (SITREPs)
- provides advice and decision support to the Crisis Coordinator from the technical resource and capabilities within the RECC.

ARPANSA will request Australian Government agencies, where relevant, to deploy LOs to the RECC (physically or virtually).

Moving from an Australian Government Coordinating Agency to a Sector Lead Agency with escalation of Tiers of the AGCMF

A crisis requiring Tier 4 coordination may be triggered by a radiological or nuclear emergency where the complexity and severity of impacts and consequences requires the highest level of coordination across the full span of Australian Government interests. During Tier 4 crisis coordination, NEMA is the Australian Government Coordinating Agency, and the Prime Minister is the Lead Minister (unless delegated to another minister).

If a radiological or nuclear crisis is determined to be requiring Tier 4 crisis coordination under the AGCMF, as agreed by relevant agencies, including NEMA and PM&C, the Lead Coordinating Senior Official will transition Australian Government Coordinating Agency responsibilities to NEMA to facilitate preparedness, response and early recovery for Tier 4 crisis coordination.

The Lead Minister role will also transition to the Prime Minister who may wish to delegate some, or all, responsibilities to another minister.

The transition does not displace portfolio-specific responsibilities for responsible agencies and ministers as detailed in the AGCMF. Should a transition occur to a crisis requiring Tier 4 coordination, ARPANSA will become a Sector Lead Agency and will continue to perform its existing executive responsibilities as detailed in the AGCMF and AUSRNEPLAN. NEMA, as the new Australian Government Coordinating Agency, will support all Sector Lead Agencies to fulfil their responsibilities as part of NEMA's whole-of-Australian Government coordination remit.

As a Sector Lead Agency, ARPANSA will adopt a supportive role to NEMA and continue to undertake the following activities:

- monitor the radiological and nuclear consequences of an emergency
- conduct sector-specific responses and consequence management activities within the health environment, including coordination across jurisdictional equities as required
- maintain ARPANSA LOs deployment to the NSR, DFAT CC or other operations centres as required to support shared situational awareness
- proactively contribute to the whole-of-Australian Government crisis communications strategy, dissemination of crisis communications products and public information (such as whole-of-Australian-Government talking points and briefing materials)
- engage with counterparts in the jurisdictions and/or international jurisdictions, coordinating with responsible agencies including DFAT and NEMA as required
- maintain business continuity plans to ensure the agency can continue to perform its role if it is affected directly by a crisis
- maintain records of decisions and actions relevant to the crisis.

6.4. Requests for assistance (RFA)

A key purpose of the Australian Government Coordinating Agency is to identify Australian Government resources, both domestic and international, to support emergency resolution and response.

Domestic assistance and the Australian Government Disaster Response Plan

Domestic crises may require Australian Government resources to support the affected jurisdiction. ARPANSA should maintain communication with these jurisdictions to understand their resource needs and gaps to prepare for, respond to, and recover from the crisis. If additional non-financial assistance is required, or a RFA is anticipated, contact should be made with NEMA, the Australian Government agency responsible for processing RFAs in accordance with the COMDISPLAN.

International assistance

During crises, international non-financial assistance may be required or offered to Australia to assist with response or recovery efforts.

The processes for offers of international assistance, or requests for international assistance, and coordinating the reception of international assistance are covered under the arrangements in the enabling *Interim* Australian Government Reception of International Assistance Plan (AUSRIAPLAN). For further information, see AUSRIAPLAN.

Australia may be required to report the emergency to the IAEA under the *Early Notification of a Nuclear Accident* and *Assistance in the Case of a Nuclear Accident or Radiological Emergency* Conventions. DFAT should be engaged as part of this process of informing the IAEA.

6.5. Deactivation and Post-Emergency

Deactivation and Post-Emergency

After all tasks are completed and no further non-financial help is needed, the Lead Coordinating Senior Official will approve reverting AUSRNEPLAN to STANDBY.

Early Recovery Response

The Lead Coordinating Senior Official oversees early recovery efforts during a radiological or nuclear emergency. ARPANSA addresses early recovery to ensure the Australian Government is prepared from the outset to support these efforts. As circumstances evolve, coordination and consequence management must adapt. Key objectives include mitigating hazards, ensuring safety and well-being, supporting affected populations, and restoring affected areas.

Post Emergency Response

ARPANSA will cease coordination once all response actions are complete, or the emergency is transitioned to an existing exposure situation. The NSR and DHDA's NIC will be notified of deactivation of AUSRNEPLAN.

Post-emergency, ARPANSA will conduct assessments and reports, ending support for forensic and law enforcement activities. They will return to normal duties but may offer ongoing technical expertise for long-term recovery in affected areas.

Lessons

Within 12 months of a major crisis requiring Tier 3 or 4 coordination, the Australian Government Coordinating Agency will conduct an evaluation. The results will be shared across government and reported to the Crisis Arrangements Committee (CAC) for integration into ongoing improvement efforts.

7. Other Considerations

7.1 International incident

In the event of an international incident involving chemical, biological, radiological or nuclear activity that requires an Australian Government response, the Lead Minister would be the Minister responsible for Foreign Affairs (see AGCMF p.51) and supported by DFAT. DFAT would work closely with ARPANSA and other Australian Government agencies to respond to the incident. An Inter-Departmental Emergency Task Force (IDETF), led by DFAT and supported by ARPANSA, would serve as the Australian Government's primary coordination mechanism.

7.2. Surge capabilities

Agencies should be ready to surge based on the severity and duration of a radiological or nuclear emergency, including laboratory surge protocols such as sample prioritisation, turnaround time expectations, and inter-laboratory coordination. The ARLN may be activated to support national sample throughout and quality assurance and quality control. This also includes protocols for radioactive waste handling, sample transport logistics, and decontamination of laboratory equipment and personnel.

7.3. Financial arrangements

ARPANSA's response options will need cost estimates, including any significant Australian Government expenses for deployment. Financial arrangements for requesting agencies will be detailed in the formal task request from the RECC. Expenses for long-term assets or equipment will not be reimbursed. Any cost-related ambiguities should be clarified before accepting a task.

8. Associated Documents

Agencies should read AUSRNEPLAN in conjunction with the following documents:

- *Australian Naval Nuclear Power Safety Act 2024*
- *Australian Naval Nuclear Power Safety Regulations 2025*
- *Australian Radiation Protection and Nuclear Safety Act 1998*
- Australian Government Clinical Guidelines for Radiological Emergencies (2012)
- Radiation Protection Series G-3 | ARPANSA
- Australian Government Crisis Management Framework (Australian Government Crisis Management Framework (pmc.gov.au))
- Handbook to the Australian Government Crisis Management Framework
- Australian Government Disaster Response Plan 2025 (COMDISPLAN) (Australian Government Disaster Response Plan 2025 (COMDISPLAN) (homeaffairs.gov.au))
- Australian Government Space Debris Re-Entry Plan (Australian Government Space Re-entry Debris Plan)
- *Interim* Australian Government Reception of International Assistance Plan (*Interim* AUSRIAPLAN)
- *Interim* Australian Government Catastrophic Crisis Plan (*Interim* AUSCATPLAN)
- *Interim* Australian Government Crisis Communication Guidelines
- Australian Government Domestic Security Crisis Plan (AUSSECPLAN)
- National Counter-Terrorism Plan (NCTP)
- The *National Emergency Declaration Act 2020* (Federal Register of Legislation - National Emergency Declaration Act 2020) and NED Aide-Memoire
- National Health Emergency Response Plan
- Defence Assistance to the Civil Community (DACC Policy and Manual)
- Defence Operations Manual (OPSMAN1)
- International Crisis Management Framework
- National Plan for Maritime Environmental Emergencies
- Crisis Appreciation and Strategic Planning (CASP) Guidebook (CASP Guidebook v.1.5 (homeaffairs.gov.au))

Annex A

Radiological and nuclear emergency scenarios

There are a range of radiological and nuclear scenarios which may eventuate and are outlined below. A comparative risk associated with the speed of onset and scale of impact for these scenarios can be seen in Diagram 5. The following radiological and nuclear scenarios may eventuate:

Radiological Dispersal Device (RDD) – 'Dirty Bomb'

An RDD is a conventional explosive used to spread radioactive material. The explosion can cause serious injuries and property damage. Such a device may create psychological fear, localised contamination and a disruption of normal activities and public services. An example of an RDD would be an explosive device laced with cesium-137 detonated in a city centre.

Improvised Nuclear Device (IND)

An IND is a crude nuclear bomb built with stolen or improvised fissile material. It aims to cause massive destruction, radiation fallout and long-term environmental damage. Obtaining or producing the fissile material to create such a device that would be required for an IND is extremely complex. An example of IND usage is a terrorist group detonating a small nuclear device in an urban area.

Nuclear Weapons

A nuclear weapon is a device that uses a nuclear reaction to create an explosion and is designed to cause significant destruction over a specified distance (subject to yield). This explosion is much more powerful than that of a conventional explosive. When a nuclear weapon explodes, it gives off 4 types of energy: a blast wave, intense light, heat, and radiation. Nuclear weapons can be in the form of bombs or missiles. Nuclear explosions produce fallout, a collection of radioactive material that can deposit on the ground, structures and buildings, or be carried by the wind. For example, during World War II, the United States used nuclear weapons against two Japanese cities, Hiroshima and Nagasaki. In the 1950s and 1960s, the United Kingdom conducted atomic bomb testing at sites in Australia, including Maralinga in South Australia and the Montebello Islands in Western Australia, causing significant radioactive contamination.

Nuclear Power Plant (NPP) or Nuclear Research Reactor Incident

A NPP or nuclear research reactor accident may release radiation due to equipment failure, natural disaster, sabotage or human error. Such an event may cause radiation exposure and could require evacuation of the research reactor and the establishment of long-term exclusion zones. Examples of such a scenario include the Chornobyl NPP accident in 1986 and the Fukushima NPP accident in 2011.

Radiological Exposure Device (RED)

A RED is a hidden radioactive source deliberately placed in a public area with malicious intent to expose people to harmful radiation without their knowledge. It aims to cause long-term health effects, psychological fear and is potentially difficult to detect. An example of such an event is a radioactive source placed in a public area.

Radiation Contamination Incident (other)

A radiation contamination incident (other) is an unplanned, undesired incident involving the release of radioactive material (with a potentially harmful effect) on to surfaces, in the air or within water, posing a risk of exposure to people or the environment. An example of a radiological contamination incident that occur in September 1987, Goiania after an unsecured, unregulated radiotherapy source was stolen from an abandoned hospital site in the city. It was subsequently handled by many people, resulting in 4 deaths and widespread contamination.

Transportation Accident

Transport can include road, rail, air or sea modes. Transport of radiation sources occurs worldwide. Transport occurs within Australia (transporting sources from one site or organisation to another) and from Australia to overseas destinations (such as the export of radiopharmaceuticals).

Five main categories of materials transported include:

- radioactive materials required for medical purposes and scientific research
- research reactor fuel
- uranium, and other naturally occurring radioactive materials (NORM)
- sealed sources used in the mining and manufacturing industries
- radioactive waste materials.

In January 2023, a tiny, highly radioactive capsule containing caesium-137 was lost during transport in Western Australia. While found, the incident triggered a large-scale, multi-agency search along a 1,400-kilometre stretch of highway and an urgent public health warning.

Australia's legislative framework relating to the safe and secure transport of radioactive material is based on international best practice. The transport of radioactive material by any person, organisation or government agency by land (road/rail), water and air must comply with the radiation safety legislation of the Australian Government, state, territory or international jurisdiction through which the radioactive material is transported.

NPW or NPV Accident

A NPW or NPV accident involves submarines or ships powered by nuclear reactors releasing radioactive materials because of equipment failure, human error, or military or malicious attack. In Australia, visiting NPWs are closely monitored by authorities such as ARPANSA and the Department of Defence to ensure there are no undetected environmental releases. The Department of Defence maintains responsibility for port entry requirements for visiting nuclear ships to Australian ports.

Radioactive Marine Release

A radioactive marine release refers to the discharge of radioactive materials into the ocean, often a result from accidents at nuclear facilities or other industrial processes involving radioactive substances, such as offshore mining.

For example, during plutonium production from 1940s to the 1980s, the Hanford Site in Washington discharged large amounts of radioactive cooling water into the soil and, indirectly, into the Columbia River.

Australia's boundaries for response responsibility relating to maritime releases includes inland waters, coastal waters (jurisdictional responsibility), the Territorial Zone, Contiguous Zone and Australia's Search and Rescue Region. The Australian Maritime Safety Authority is the lead Australian Government agency with respect to a radiological maritime release not within the jurisdictional responsibility.

Space Debris Re-Entry

Space debris re-entering the Earth's atmosphere may include components containing radiological material. If such material survives atmospheric re-entry, it may present a radiological hazard requiring assessment and response. In Australia, the Australian Space Agency provides advice on tracking and mapping space debris re-entry, identifying potential impact sites and assessing areas and nature of risk where feasible. The Australian Government Space Re-entry Debris Plan 2025 (AUSSPREDPLAN) explains how the Australian Government manages risk posed by re-entering space debris, which may impact Australia. The AUSSPREDPLAN is maintained by the National Emergency Management Agency (NEMA).

Speed of onset and scale of impact of radiological and nuclear events

The speed of onset and the scale of impact of radiological events will vary subject to a range of factors. Diagram 3 identifies possible aspects of speed of onset and scale of impact of various types of radiological and nuclear events. It is important to note that only once an event has happened can the impact be determined. Once determined, then the consequences can be determined using the International Nuclear and Radiological Events Scale (INES).[7] Events are rated at seven levels. The scale is logarithmic – that is, the severity of an event is about ten times greater for each increase in level of the scale. Events are considered in terms of impact on people and the environment, impact on radiological barriers and control, and impact on defence in depth. Events without safety significance are rated as Below Scale/Level 0, and events that have no safety relevance with respect to radiation or nuclear safety are not rated on the scale.

[7] The INES is a scale developed for use by countries, including Australia, solely for the purpose of communicating with the public on the safety significance of events associated with sources of radiation. The INES is not to be used as a basis for emergency response actions. INES is intended for use in non-military applications.

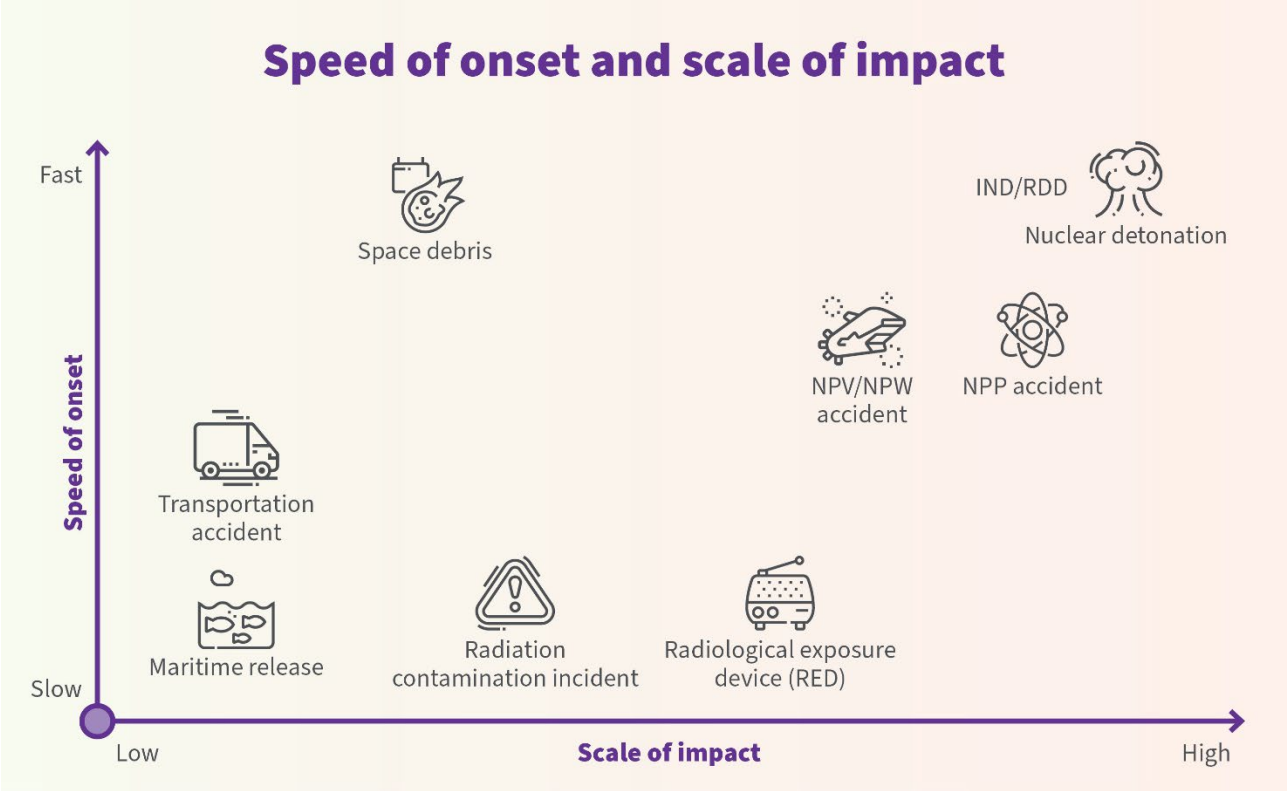

Diagram 5: The potential speed and scale of impact of various types of radiological or nuclear emergencies.

Annex B
Radiation Emergency Coordination Centre Factsheet

About the Radiation Emergency Coordination Centre (RECC)

The RECC is the nation's radiation emergency response centre. It coordinates national responses to radiological or nuclear emergencies by organising response and recovery operations between:

- Australian Government and jurisdictions
- other Australian Government crisis operations centres
- the international radiological and nuclear community via the IAEA's Incident and Emergency Centre.

Why is it important?

The RECC ensures a consistent, coordinated response to radiological or nuclear emergencies in Australia. This makes the best use of our national resources in crisis situations and minimises duplication of effort across government agencies.

The RECC utilises ARPANSA's position to provide:

- specialist radiation emergency field teams
- fixed and mobile analytical laboratory support
- coordination with the ARLN for surge capacity, sample throughput, and inter-laboratory quality assurance and quality control (QA/QC).
- radiation hazard modelling products

  expert radiation protection and nuclear safety advice to the Australian Government to assist during all phases of a nuclear or radiological emergency.

Meeting our goals

ARPANSA's mission is to protect the public and environment from the harmful effects of radiation. ARPANSA employ scientific, technical, regulatory and operational elements to support that mission.

The RECC provides support to affected jurisdictions by:

- providing information to help states and territories to respond to the emergency, including plume modelling and technical advice from nuclear reactor experts
- provision of field and laboratory-based radiation emergency response teams
- provision of ARPANSA's GIS to support jurisdiction decisions with real-time meteorological data from the Bureau of Meteorology.

ARPANSA also supports national and international radiological and nuclear preparedness through:

- its support to Australian planning for visiting NPW's.
- its role as the National Competent Authority for two international Conventions relating to radiological and nuclear emergencies, the Convention on Early Notification of a Nuclear

Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

- its role as a WHO Collaborating Centre for Radiation Protection and as a member of the WHO's Radiation Emergency Medical Preparedness and Assistance Network (REMPAN).

When is the Radiation Emergency Coordination Centre activated?

The RECC is activated by the CEO of ARPANSA or Chief Radiation Health Scientist of ARPANSA when a significant radiological or nuclear emergency or emerging threat is identified.

An emergency that would lead to the activation of the RECC may occur:

- at nuclear reactor sites
- on NPW's or NPV's
- at medical facilities using radioactive materials
- at industrial sites that use or make radioactive sources
- during transport of radiological materials
- due to dispersal of radiological material in a public place
- internationally, where a radiological or nuclear emergency in another country has the potential to impact the Australian public or environment.

How it works

Once activated and based on the nature of the emergency, the RECC:

- provides advice on predicted spread and concentration of radionuclides
- provides advice on nuclear reactors through a Nuclear Reactor Advisory Group made of ARPANSA staff who have worked internationally on commissioning, operating and regulating various types of nuclear reactors
- provides advice on the effects of radiation on the general community and treatment of casualties through the *Australian Clinical Guidelines for Radiological Emergencies – September 2012*, and the *Guide for Radiation Protection in Emergency Exposure Situations – Radiation Protection Series (RPS) G-3 Part 1 and Part 2*
- provides centralised crisis communications
- coordinates situational awareness
- coordinates ARPANSA's laboratory assets for assessment of field samples
- maintains specialised radiation monitoring capability to support the assessment of radiation levels and the extent of radioactive contamination in the event of a radioactive release from a nuclear or radiological emergency
- hosts emergency meetings of the RHC, the NSC and other expert committees
- provides technical advice to committees and government
- gathers information to help inform decision-making

- keeps the community informed with radiological or nuclear emergency-related news updates
- carries out radiological or nuclear aspects of Australian Government crisis plans
- consults with emergency management sectors in other government agencies across Australia
- provides outcomes, situation reports, plume modelling and ministerial briefings
- conducts risk assessments and evaluations of capacity and capability
- anticipates next steps and develops information resources to assist with planning and decision-making.

Where is the RECC located?

The RECC is located within ARPANSA's office in Melbourne and is maintained 24/7. The RECC can also operate virtually. Other strategic locations may be used if needed.

Who is involved?

While active and depending on the nature of the emergency, the RECC may draw on staff from a number of organisations including:

- PM&C (as required subject to event)
- the Department of Defence
- DHDA
- DFAT
- ANNPSR
- ANSTO
- ARPANSA
- NEMA.

Contact

If you have any questions about the RECC, please contact – crisismanagement@arpansa.gov.au.