EPR-
JPLAN
2017

EMERGENCY PREPAREDNESS AND RESPONSE

Joint Radiation Emergency Management Plan

of the
International Organizations

JOINTLY SPONSORED BY THE CTBTO, EADRCC, EC, EUROPOL, FAO, IAEA, ICAO, ILO, IMO, INTERPOL, OECD/NEA, PAHO, UNDP, UNEP, OCHA, OOSA, WHO, WMO

IN COOPERATION WITH THE IFRC, UNSCEAR

DATE EFFECTIVE: **1 MARCH 2017**

IAEA
International Atomic Energy Agency

IAEA SAFETY STANDARDS AND RELATED PUBLICATIONS

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EPR - JPLAN (2017)

Emergency Preparedness and Response

Joint Radiation Emergency Management Plan
of the International Organizations

Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)
Euro-Atlantic Disaster Response Coordination Centre (EADRCC)
European Commission (EC)
European Police Office (EUROPOL)
Food and Agriculture Organization of the United Nations (FAO)
International Atomic Energy Agency (IAEA)
International Civil Aviation Organization (ICAO)
International Labour Organization (ILO)
International Maritime Organization (IMO)
INTERPOL
Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD NEA)
Pan American Health Organization (PAHO)
United Nations Development Programme (UNDP)
United Nations Environment Programme (UNEP)
United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
United Nations Office for Outer Space Affairs (OOSA)
World Health Organization (WHO)
World Meteorological Organization (WMO)

In cooperation with the:

International Federation of Red Cross and Red Crescent Societies (IFRC)
United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)

INTERNATIONAL ATOMIC ENERGY AGENCY

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JOINT RADIATION EMERGENCY MANAGEMENT PLAN OF THE INTERNATIONAL ORGANIZATIONS
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Foreword

The Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, both adopted in 1986, are the prime legal instruments that establish an international framework to facilitate the exchange of information and the prompt provision of assistance in a nuclear or radiological emergency, with the aim of minimizing the consequences. The International Atomic Energy Agency (IAEA has specific functions assigned to it under these conventions, to which the European Atomic Energy Community (Euratom), the World Health Organization (WHO), the World Meteorological Organization (WMO) and the Food and Agriculture Organization of the United Nations (FAO) are parties. The arrangements between the IAEA, States and international intergovernmental organizations (international organizations) for facilitating the practical implementation of the articles of the two conventions that are operational in nature are documented in the IAEA's Operations Manual for Incident and Emergency Communication (IEComm)[1] and the IAEA's Response and Assistance Network (RANET)[2]. In addition to the IEComm arrangements and pursuant to the obligations placed on the IAEA by the conventions, the IAEA regularly convenes the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE)[3], whose purpose is to coordinate the response of the relevant international organizations to nuclear or radiological emergencies and to develop common preparedness and response arrangements. Although the conventions assign specific response functions and responsibilities to the IAEA and the parties, various international organizations have — by virtue of their statutory functions or of related legal instruments (including e.g. the World Health Organization's International Health Regulations 2005[4]) — functions and responsibilities that encompass aspects of preparedness and response in this context. Moreover, some regional organizations/bodies (e.g. the European Commission) are party to legally binding treaties and have directives and regulations that have a bearing on the emergency preparedness and response arrangements among the associate States. There are also bilateral agreements between some international organizations that have relevance to emergency preparedness and response arrangements.

In 2015, the IAEA issued a General Safety Requirements publication on Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7*,* jointly sponsored by Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), FAO, the IAEA, the International Civil Aviation Organization (ICAO), the International Labour Organization (ILO), INTERPOL, the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD NEA), the Pan American Health Organization (PAHO), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the World Health Organization (WHO) and the World Meteorological Organization (WMO).

It is recognized by the IACRNE participating organizations, and reflected in the above requirements, that sound emergency preparedness can substantially improve the response to an emergency. With this in mind,

[1] INTERNATIONAL ATOMIC ENERGY AGENCY, Operations Manual for Incident and Emergency Communication, EPR-IEComm, IAEA, Vienna (2012). IEComm is the successor to the previous IAEA Emergency Notification and Assistance Technical Operations Manuals (ENATOM), first issued on 18 January 1989. States and relevant international organizations have since then regularly received updates to the manual. The manual covers the communication protocols for Contact Points identified under the Early Notification Convention and the Assistance Convention, as well as the protocol for users of the International Nuclear and Radiological Event Scale (INES).

[2] INTERNATIONAL ATOMIC ENERGY AGENCY, IAEA Response and Assistance Network, EPR-RANET 2013, IAEA, Vienna (2013). RANET was developed to facilitate the provision of international assistance upon request and in compliance with the Assistance Convention. The network forms an operational mechanism to provide assistance in different technical areas, with the help of national capabilities registered in the network.

[3] Formerly, the Inter-Agency Committee for the Co-ordinated Planning and Implementation of Response to Accidental Releases of Radioactive Substances, which was established following a meeting of representatives of FAO, the ILO, UNEP, UNSCEAR, WHO, WMO and the IAEA at the Special Session of the IAEA General Conference in September 1986.

[4] See Appendix B.

the international organizations that are members of the IACRNE develop, maintain and cosponsor this Joint Radiation Emergency Management Plan of the International Organizations (Joint Plan).

The IAEA is the main coordinating body for the development and maintenance of the Joint Plan. The Joint Plan does not prescribe arrangements between the participating organizations, but describes a common understanding of how each organization prepares for and responds to an emergency. Nothing in the Joint Plan should be construed as superseding the arrangements in place in the international organizations (or States). However, all international organizations (and States), irrespective of whether they are members of IACRNE, are invited to consider these arrangements in their own emergency management plans.

This document is the seventh edition of the Joint Plan. It describes the arrangements as envisaged from 1 March 2017.

Although a controlled distribution list is maintained for the Joint Plan and any amendments, it is not restricted in its availability. An up to date version is available on the IACRNE web site, the IAEA's emergency web site (USIE) and the IAEA's public web site (see Section 4.9.).

NOTES FOR THE USER

This Joint Plan describes arrangements operative as of 1 March 2017 and supersedes all previous editions. All copies of previous editions should now be removed from operational response arrangements and either archived or destroyed.

The 2017 edition incorporates the following changes:

- UNDP was included as a new participating organization;
- The role of UNSCEAR was clarified as a corresponding organization;
- The role of the ILO was clarified as a participating organization;
- Tasks and responsibilities of participating organizations and participating organizations' response actions were elaborated;
- A new ConvEx-2f exercise designed to test the Standard Operating Procedures (SOPs) was introduced;
- All appendices were updated, and two new appendices were added (Appendix C: Roles and Capabilities of Corresponding Organizations and Appendix F: Standard Operating Procedures);
- Roles and responsibilities of the IFRC were added;
- Additional clarification of arrangements and editorial changes were made.

For further information, feedback and copies, please contact the Secretary of the Inter-Agency Committee on Radiological and Nuclear Emergencies, Incident and Emergency Centre, International Atomic Energy Agency, Vienna International Centre, P.O. Box 100, 1400 Vienna, Austria.

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Summary

Introduction

This Joint Emergency Management Plan of the International Organizations (Joint Plan) describes the interagency framework of preparedness for and response to an actual, potential or perceived nuclear or radiological emergency independent of whether it arises from an accident, natural disaster, negligence, nuclear security event or any other cause.

The following international organizations cosponsor the Joint Plan: the **Comprehensive Nuclear-Test-Ban Treaty Organization** (CTBTO), the **Euro-Atlantic Disaster Response Coordination Centre** (EADRCC), the **European Commission** (EC), the **European Police Office** (EUROPOL), the **Food and Agriculture Organization of the United Nations** (FAO), the **International Atomic Energy Agency** (IAEA), the **International Civil Aviation Organization** (ICAO), the **International Labour Organization** (ILO), **INTERPOL**, the **International Maritime Organization** (IMO), the **Nuclear Energy Agency of the Organisation for Economic Co-operation and Development** (OECD NEA), the **Pan American Health Organization** (PAHO), the **United Nations Development Programme** (UNDP), the **United Nations Environment Programme** (UNEP), the **United Nations Office for the Coordination of Humanitarian Affairs** (OCHA), the **United Nations Office for Outer Space Affairs** (OOSA), the **World Health Organization** (WHO) and the **World Meteorological Organization** (WMO). In addition, the Joint Plan has been developed in cooperation with the **International Federation of Red Cross and Red Crescent Societies** (IFRC) and the secretariat of the **United Nations Scientific Committee on the Effects of Atomic Radiation** (UNSCEAR).

The IAEA is the main coordinating body for development and maintenance of the Joint Plan.

The Joint Plan is intended to support and underpin the efforts of national governments and seeks to ensure a coordinated and harmonized international response to nuclear or radiological emergencies. It is not intended to interfere with or replace the emergency preparedness and response arrangements of international organizations (or States).

Planning basis

States have the ultimate responsibility to protect life, health, property, the environment and quality of life within their territories. National regulatory bodies require site specific emergency plans for their nuclear installations. Despite extensive precautions, if a release of radioactive material leads to an actual, potential or perceived emergency, other States will require information to be able to advise on protective actions and determine the need for monitoring of the environment and of commodities. In nuclear or radiological emergencies, State authorities and international organizations need authoritative and credible information to address the consequences of the event. The Convention on Early Notification of a Nuclear Accident ('Early Notification Convention') and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency ('Assistance Convention') are the prime legal instruments which, on a global scale, facilitate the international exchange of information and the prompt provision of assistance in a nuclear or radiological emergency.

In addition, international organizations may also have designated roles under these conventions, other international instruments, or statutory and legally assigned functions related to the international exchange of relevant information, assistance or other aspects of emergency management.

Emergency response

In accordance with the Early Notification Convention and the Assistance Convention, the IAEA — as the leading organization for international response to nuclear or radiological emergencies — has prime responsibility for activating the interagency coordination mechanism. It receives reports of an emergency from a designated competent authority in a State (or international organization) and verifies any unconfirmed reports. It establishes primary functional links with the reporting State (or international organization) and any affected State(s), providing direct communication with competent authorities. It also establishes functional links with relevant international organizations. These organizations may establish links with other competent authorities, agencies, regional centres and programmes that are prepared to provide information, advice or assistance.

The IAEA shares information with all participating organizations[5]. If any other participating organization receives credible information or a request for information, advice or assistance in case of a nuclear or radiological emergency, it informs the IAEA and other participating organizations and coordinates the provision of advice or assistance in accordance with their respective mandates and obligations and the provisions of this Joint Plan.

If a State requests assistance from the IAEA under the Assistance Convention, the provision of assistance will follow the IAEA's Response and Assistance Network (RANET) process: The IAEA (1) informs States and international organizations that could provide assistance; (2) evaluates the situation in coordination with relevant international organizations and may, in agreement with the requesting State, dispatch an initial assessment (fact finding) team; (3) develops, in coordination with the requesting State and assisting parties, a detailed assistance action plan; and (4) upon acceptance of the plan by all involved parties, obtains authorization for the deployment of resources from assisting competent authorities and international organizations.

Emergency preparedness

The Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) is the coordination mechanism among participating organizations and as such seeks to ensure the development and maintenance of consistent and harmonized arrangements for preparedness for and response to nuclear or radiological emergencies.

Interagency procedures and arrangements, including those for communicating with the media, are documented separately from this Joint Plan.[6] They may be updated from time to time independently of this Joint Plan. The Joint Plan is reviewed at least biennially and revised if necessary.

The IACRNE is also a mechanism for coordinating international exercises organized by any participating organization, in order to optimize the involvement of international organizations and States and to provide an opportunity to periodically exercise response arrangements in a coordinated manner. The participating organizations make their best efforts to harmonize their programmes for assisting States in strengthening national and regional arrangements. They encourage their counterparts at the national level to strengthen their cooperation and ensure that emergency arrangements are coordinated nationally so that they are compatible with the interagency arrangements described in this Joint Plan.

[5] Participating organizations are international organizations that are members of the Inter-Agency Committee on Radiological and Nuclear Emergencies and cosponsors of this Joint Plan; the IAEA may also share information with the corresponding organizations, as appropriate.
[6] IACRNE Standard Operation Procedures are formalized at IACRNE meetings.

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Section 1

1. INTRODUCTION

1.1. Purpose and objectives

The purpose of this Joint Plan is to describe the interagency framework and *arrangements*[7] of preparedness for and response to a nuclear or radiological *emergency* irrespective of whether it arises from an accident, natural *disaster*, negligence, nuclear security event or any other cause.

In particular, its objectives are to:

(1) Provide a common understanding of (a) the emergency preparedness and response arrangements of each participating organization, and (b) any relevant interagency agreements;

(2) Provide an overall concept of operations among the international organizations based on the emergency response arrangements of each participating organization, and any existing interagency agreements, in order to facilitate a timely, effective and coordinated response;

(3) Facilitate the development of agreements among participating organizations on operational emergency preparedness and response issues, if appropriate;

(4) Provide a common understanding of the process for updating the interagency response agreements;

(5) Provide a common understanding of preparedness roles and responsibilities of the participating organizations with respect to: international standards, supporting national capabilities through provision of guidance and training, relevant research, emergency exercises and other preparedness considerations;

(6) Guide managers in all participating organizations who need to ensure that all appropriate arrangements are given the necessary support within their organization;

(7) Facilitate the well-founded development, maintenance and training of *emergency response* arrangements in each participating organization;

(8) Draw the attention of personnel in States and international organizations[8] to this Joint Plan and to facilitate the development of compatible arrangements, if appropriate.

[7] Terms in italics are explained in Appendix D.
[8] Particularly those not participating in the Joint Plan.

1.2. Scope

The Joint Plan describes the arrangements of the participating organizations for responding to a nuclear or radiological emergency irrespective of its cause and the measures for developing, maintaining, exercising and improving these arrangements. The Joint Plan does not include detailed procedures for its implementation.

Although the Joint Plan may refer to international organizations other than those participating, these references are only understandings by the participating organizations and do not necessarily represent the understandings of those not participating in the Joint Plan.

1.3. Participating organizations

Cosponsors of this Joint Plan are the IACRNE *participating organizations*. The participating organizations are expected to follow the cooperative arrangements described in this Joint Plan.

The participating organizations are: the **Comprehensive Nuclear-Test-Ban Treaty Organization** (CTBTO), the **Euro-Atlantic Disaster Response Coordination Centre** (EADRCC), the **European Commission** (EC), the **European Police Office** (EUROPOL), the **Food and Agriculture Organization of the United Nations** (FAO), the **International Atomic Energy Agency** (IAEA), the **International Civil Aviation Organization** (ICAO), the **International Labour Organization** (ILO), **INTERPOL**, the **International Maritime Organization** (IMO), the **Nuclear Energy Agency of the Organisation for Economic Co-operation and Development** (OECD NEA), the **Pan American Health Organization** (PAHO), the **United Nations Development Programme** (UNDP), the **United Nations Environment Programme** (UNEP), the **United Nations Office for the Coordination of Humanitarian Affairs** (OCHA), the **United Nations Office for Outer Space Affairs** (OOSA), the **World Health Organization** (WHO) and the **World Meteorological Organization** (WMO).

1.4. Corresponding organizations

The IACRNE *corresponding organizations* are: the **International Federation of Red Cross and Red Crescent Societies** (IFRC), the **United Nations Department of Safety and Security** (UNDSS), the **United Nations Educational, Scientific and Cultural Organization** (UNESCO), the **United Nations Children's Fund** (UNICEF), the **United Nations Scientific Committee on the Effects of Atomic Radiation** (UNSCEAR), the **United Nations World Food Programme** (WFP) and the **World Customs Organization** (WCO). The Joint Plan may be prepared in cooperation with the corresponding organizations. Sharing of information on the corresponding organizations' roles and capabilities with the participating organizations may become relevant for effective coordination of the international response to a nuclear or radiological emergency and may contribute to the emergency response synergies.[9]

[9] In a nuclear or radiological emergency, corresponding organizations included in the Joint Plan have access, if appropriate, to the protected IAEA emergency web site, the Unified System for Information Exchange on

This edition of the Joint Plan was prepared in cooperation with the **IFRC** and the Secretariat of **UNSCEAR**.

1.5. Authorities for the Joint Plan

Each participating organization has various statutory and other legally assigned functions. Appendix A of this Joint Plan lists the various legal instruments, resolutions of the United Nations General Assembly, regulations, standards and inter-organizational agreements that together provide the authorities for these organizations and the Joint Plan. Specific decisions of executive bodies and/or specific regulations are also referred to in the text as appropriate.

1.6. Relationship to other plans

The Joint Plan is intended to reflect the arrangements of the participating organizations and be in harmony with their specific *emergency plans* and procedures and in accordance with their respective statutes, mandates and obligations. The Joint Plan neither prejudices nor replaces any *emergency preparedness* and response arrangements of participating organizations (or States), nor does it prejudice the respective roles and responsibilities of the participating organizations as they may be specified by relevant instruments of the respective organizations. However, other international organizations (and States) are encouraged to consider this interagency framework in the context of their own emergency management plans, where applicable.

1.7. Joint Plan availability

The Joint Plan is formally made available in hard copy to all participating organizations and those corresponding organizations that contributed to the Joint Plan in parallel with the IAEA's IEComm and the IAEA's RANET. Although a controlled distribution list is maintained for hard copies of the Joint Plan and for any amendments, it is not restricted in its availability.

The electronic version of the Joint Plan is available on the IACRNE web site, the IAEA's emergency web site (USIE) and the IAEA's public web site, www.iaea.org (see 4.9.).

Incidents and Emergencies (USIE); based on the information available through USIE, they may thus be in a position to better plan their own response actions and safety.

Section 2

2. PLANNING BASIS

2.1. Hazard identification

Throughout the world, but particularly in technologically advanced countries, there are a large number of nuclear installations, the regulatory bodies for which require the development and maintenance of site specific emergency preparedness and response plans. There are also many other types of *facilities and activities* that involve the use of radiation or radioactive material for agricultural, industrial, medical, scientific and other purposes. Such facilities and activities include, for example, the production, use, import and export of radiation sources; the transport of radioactive material; the decommissioning of facilities; or satellites carrying radioactive material.

The response to a nuclear or radiological emergency may involve many national organizations (e.g. the operating organization and response organizations at the local, regional and national levels) as well as international organizations. Therefore, the response to a nuclear or radiological emergency has to be well coordinated.

2.1.1. Nuclear emergencies

Although the probability of emergencies at nuclear installations[10] is low, if such emergencies do occur at installations of certain types, precautionary and urgent protective actions may need to be taken near the site (including in any neighbouring State if the emergency happens close to a national border). Regulatory bodies require the licensee to have detailed emergency preparedness and response arrangements in place for these installations, including an emergency classification scheme to initiate relevant response operations both on and off the site according to the *emergency class*. If there is a release of radioactive material, accidental or deliberate, that could lead to an actual, potential or perceived emergency, there will be a need to monitor radiation and contamination levels out to greater distances in order to review any initial protective actions and consider any additional countermeasures.[11] Other States may need access to technical and administrative information to enable them to provide advice and other protective actions on trade and travel for their domestic population and nationals abroad. Even for emergencies without significant radiological releases, there may be considerable public anxiety, and competent authorities in other States might be expected to provide detailed information to their government and to the public regarding the status and nature of the emergency.

[10] This relates to facilities in emergency preparedness categories I and II as defined in Table 1 of IAEA Safety Standards Series No. GSR Part 7.

[11] See INTERNATIONAL ATOMIC ENERGY AGENCY, Actions to Protect the Public in an Emergency due to Severe Conditions at a Light Water Reactor, EPR-NPP Public Protective Actions, IAEA, Vienna (2013).

2.1.2. Radiological emergencies

For certain types of reactors or fuel cycle facilities (such as some research reactors or critical assemblies), as well as for other facilities involving radiation or radioactive material (such as radiopharmaceutical manufacturing facilities, hospitals, research laboratories, industrial irradiators)[12], and for certain types of emergencies at large nuclear installations, the radiological consequences of an event will always be localized (for example, radioactive spills, fuel handling emergencies, loss of shielding or loss of control for a large gamma emitter). Other radiological emergencies can occur when, for example, an uncontrolled radiation source (a so-called 'orphan source') or radioactive contamination appears in the human environment; an emergency leads or may lead to a release of radioactive material to the environment (e.g. radiological dispersion or exposure device), exposing people; an accident occurs during the transport of radioactive material; or a space object containing radioactive material re-enters the atmosphere.

Although emergencies such as these would be expected to affect few people, they are more likely to happen than a major release from a nuclear installation, and the impact on people and the environment, although generally local in extent, may still be serious.

2.1.3. Emergencies triggered by nuclear security event(s)

Nuclear and radiological emergencies may also be triggered by a nuclear security event that includes criminal or intentional unauthorized acts; it also includes unauthorized acts that involve or are directed at nuclear material, other radioactive material, associated facilities and associated activities. Examples of such events include sabotage as well as using, or threatening to use, a radiological dispersal device or radiological exposure device.

2.1.4. Unconfirmed nuclear or radiological event

Situations may occur that might indicate a possible nuclear or radiological emergency. This may include, for example, the appearance of traces of radionuclides in the air, in food or in other commodities; it may also be precipitated by an unsubstantiated rumour. Competent authorities in States and participating organizations may need rapid confirmation or investigation of such situations in order to be able to adequately respond to them or to contain the spreading of rumours.

2.2. Roles and responsibilities

2.2.1. National responsibilities

The Joint Plan is based on the fundamental precept that States have the ultimate responsibility to protect life, health, property, the environment and the quality of life on their territories according to their national legislations; it takes account of the rights and duties of States under international law. Bilateral or multilateral agreements (or, where appropriate, a combination thereof) between States for preventing or mitigating the consequences of a nuclear or radiological emergency are a useful support of these national responsibilities.

2.2.2. International responsibilities

The roles and responsibilities of the participating organizations are carried out according to their various statutory and legally assigned functions (Appendix A) in a

[12] This relates to emergency preparedness category III as defined in the IAEA Safety Standards Series No. GSR Part 7.

spirit of cooperation. A summary of the response tasks of the participating organizations is given in Table 1. More details on the authorities, responsibilities, functions and capabilities maintained to meet these responsibilities are described in Appendix B.

2.2.3. Responsibilities for notification and assistance

Under Article 2, parties to the Early Notification Convention forthwith notify States that are or may be affected and the IAEA of a release that could be of radiological safety significance for another State and provide relevant information to minimize the consequences. The IAEA forthwith informs parties, IAEA Member States, other States that may be affected and participating organizations[13] of the notification and information received.

TABLE 1: TASKS AND RESPONSIBLE PARTICIPATING ORGANIZATIONS[14]

Tasks	Responsible organization(s)
Key tasks in **pre-emergency phase**	
Gather information from open sources	IAEA, WHO, PAHO
Receive and/or assess information/notification from States	IAEA, WHO, PAHO, UNDP, (EC)
Provide a platform for the exchange of information on the radiological situation in the environment	IAEA, (EC)
Gather real time radioactive particles and noble gas monitoring data	CTBTO
Critical response tasks in **emergency phase**	
Initial response	
Notify or inform forthwith States and participating organizations	IAEA, (EC)
Offer *good offices*	IAEA
Activate interagency emergency response	IAEA
Inform about atmospheric releases of radioactive material	
- aircraft in flight and/or international aerodromes concerned	ICAO, WMO
- vessels at sea or in port through NAVAREA Coordinators	IMO
Exchange of information	
Assess potential radiological consequences and likely emergency progressions	IAEA
Disseminate promptly any substantive information	IAEA, (EC)
Facilitate exchange of international criminal intelligence	INTERPOL, EUROPOL
Provide real time radioactive particles and noble gas monitoring data, including confirmation of no detection	CTBTO, (EC)
Assess the effects of radiation exposure on the movement of passengers and/or cargo through international aerodromes and/or seaports and **disseminate promptly** substantive information	ICAO, IMO, WHO, IAEA
Support national/local authorities in disseminating substantive information to local communities	UNDP
Survey and analyse protective and other response actions decided on or recommended by the governments other than the government of the *Accident State*	OECD NEA
Coordination	
Coordinate	
- interagency response to a nuclear or radiological emergency	IAEA
- overall interagency humanitarian response to disasters or complex emergencies	OCHA
- provision of international humanitarian assistance at the request of the affected State	OCHA, EADRCC, (EC)
- medical and public health related surveillance, risk assessment and response	WHO, PAHO, (EC)
- activation of the IACRNE ad hoc Working Group on Air and Maritime Transportation	ICAO

[13] And those corresponding organizations that contributed to the Joint Plan.
[14] Based on the mandates described in Appendix B.

2

Tasks	Responsible organization(s)
- integration of approaches into humanitarian response to support the transition from humanitarian assistance to post-emergency recovery and human development	OCHA, UNDP
Advice or assistance (on request directly from a State or through participating organization)	
Send request for advice or assistance to relevant participating organizations or States	IAEA, (EC)
Arrange for advice or assistance on	
- assessment of facility conditions and accident mitigation	IAEA
- assessment of radiological consequences, potential radiological hazards and consequences of an emergency	IAEA
- protective actions and other response actions for the public, workers and emergency workers	IAEA, WHO, ILO
- meteorological information (observations, forecasts and warnings)	WMO
- atmospheric transport and dispersion predictions	WMO, CTBTO
- physical dosimetric measurement services	IAEA
- radiological assessment and application of international standards	IAEA
- radiation protection support, personnel and equipment for operations in affected areas	IAEA
- public health surveillance, risk assessment and interventions to protect human health (food and drinking water restrictions, access to and acquisition of pharmaceuticals)	FAO, WHO, PAHO, (EC)
- biological dosimetry	WHO, PAHO, IAEA
- diagnosis and treatment of radiation casualties and internal contamination	WHO, PAHO, IAEA
- mitigation of mental health impact	WHO, PAHO
- agricultural countermeasures and remediation strategies	FAO
- environmental monitoring and sampling programmes for interventions related to food and assessment of long term impact	IAEA, FAO, UNEP
- implementation and/or enforcement of control measures for imported and exported food and/or feed stuff	FAO, (EC)
- control of food and feeding stuffs	FAO, WHO, PAHO, (EC)
- re-establishing disrupted police services	INTERPOL
- relocation	IAEA, UNEP
- decontamination, waste management	IAEA, NEA
- response to a vessel involved or affected at sea or in port	IMO
- response of flight crews and civil aviation authorities, including aerodrome authorities	ICAO, WHO, PAHO
- early recovery strategy and empowering people with knowledge	UNDP
Public information	
Check for the consistency and complementarity of information available on participating organizations' public web sites	OECD NEA
Confer and agree, to the extent possible, on the consistency of any media releases, including those pertaining to air and maritime transportation	Relevant organizations
Produce situation reports in the case of a disaster or *complex emergency*	OCHA, EADRCC
produce humanitarian key messages for the humanitarian community	OCHA
Key tasks in **post-emergency (long term) phase**	
Comprehensively assess radiological consequences	IAEA, (EC)
Assist in recovery and remediation	IAEA, UNDP, (EC)
Assess and advise on public health risks	WHO, PAHO, (EC)
Advise on long term follow-up programmes and health surveillance of affected population	WHO, PAHO
Provide results of radionuclide air concentrations (or deposition) collected from global/regional monitoring network	CTBTO, (EC)
Assist in advance social and economic development, improving living standards, restoring community self-reliance and self-sufficiency	UNDP, (EC)
Event investigation	
Advise or assist in investigation of crimes	INTERPOL, EUROPOL
Advise or assist in seeking international suspects	INTERPOL

(EC) — for the EU Member States, Norway, Switzerland and the Former Yugoslav Republic of Macedonia

States Parties to the Assistance Convention (Article 2) and/or IAEA Member States may request assistance from other States Parties directly or through the IAEA, and from the IAEA, or, where appropriate, from other international organizations. Furthermore, the IAEA Board of Governors[15] has authorized the IAEA to respond to requests for emergency assistance from a State that is neither Party to the Assistance Convention nor a Member State of the IAEA. A State may also request that the IAEA coordinate at the international level assistance that may become available. These articles place an important responsibility on the IAEA as a focal point for the coordination of assistance.

2.3. Response objectives

The objective of the coordinated emergency response of the participating organizations, in the context of this Joint Plan, is to provide a coordinated, appropriate and timely interagency response to a nuclear or radiological emergency that has actual, potential or perceived radiological consequences in order to coordinate public information and to assist the 'Accident State' and/or affected State(s), if requested, in minimizing the adverse consequences to people, property and the environment, and to lay the foundations for an effective recovery.

2.4. Coordination of interagency response

In order to maximize the effectiveness of the interagency response, the participating organizations should coordinate their response arrangements and actions among themselves and with the relevant competent authorities of States, ensuring clear lines of responsibility and authority in accordance with their respective statutes, mandates and obligations[16].

The objectives of the coordination of the interagency response are to:

(1) Make the most efficient use of each organization's capabilities in the context of existing agreements and mandates;

(2) Make the most efficient use of the States' capabilities with respect to coordination with international organizations;

(3) Exchange information in order to facilitate a common understanding of the event/situation, its actual and potential consequences and the way it is expected to develop;

(4) Foster a common and harmonized approach, respecting individual mandates, on developing emergency related advice requested by States and on statements to the media and the public;

(5) Exchange information regarding actions taken or information released, as appropriate;

[15] GOV/1999/15: Financing of the discharge of Agency obligations under the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, including the provision of assistance by the Agency in the event of a Nuclear Accident or Radiological Emergency.

[16] Coordination is also needed in preparedness, in particular with respect to the organization, preparation, conduct and evaluation of international exercises.

(6) Facilitate the efficient and coordinated provision of assistance to States in accordance with the mandate of the respective organization and avoid duplication of effort, since several organizations may be approached with the same request;

(7) Facilitate ad hoc arrangements on the division of work among international organizations that may be needed.

The participating organizations should cooperate using the coordination framework outlined in Fig. 1 in order to achieve these objectives.

In addition, the IACRNE ad hoc Working Group on Air and Maritime Transportation facilitates a coordinated and consistent response among concerned international organizations and trade associations in the event of a nuclear or radiological emergency that is having or is perceived to be having an impact on international air and/or maritime navigation.

2.5. Financing

The cost of each organization's participation in support of this Joint Plan is the sole responsibility of that organization, unless other agreements or mechanisms exist.

2.6. Guiding principles

Emergency response actions undertaken by the participating organizations are carried out in a manner consistent with their statutory roles and responsibilities. They should support the stated purposes of the relevant international conventions and other international legal instruments, UN General Assembly resolutions and the relevant resolutions of the governing bodies of participating organizations as well as the relevant requirements of international standards, in particular the IAEA Safety Standards Series No. GSR Part 7. Moreover, the following guiding principles are relevant for coordinating emergency response arrangements among international organizations:

(1) An overall coordinating authority and structure are identified according to international agreements and rules;

(2) The roles and responsibilities of participating organizations are clearly defined and documented;

(3) Sufficient resources are made available for the response and for the development and maintenance of the response arrangements;

(4) Clear response coordination mechanisms and procedures are developed, documented and made available to all participating organizations.

2.7. Concept of operations

The concept of operations recognizes the primary role of national governments for protecting life, property and the environment within their territories and territorial waters, consistent with their obligations under international and domestic law. The concept of operations recognizes the roles of participating organizations, as described in Appendix B and, in particular, the IAEA's role in coordinating the interagency

response to nuclear or radiological emergencies, OCHA's role in coordinating humanitarian response, and WHO's and PAHO's coordinating roles regarding the public health response.

The level of the response by the participating organizations to a specific emergency will depend on many factors, including: the nature and location of the emergency; the impact, or potential impact, on health, property and the environment; the size of any affected area; the level of public interest; and the types of activities needed to support the 'Accident State' and affected States.

In accordance with the relevant conventions, the IAEA has the primary responsibility for triggering the activation of the interagency response; it acts as the focal organization for the interagency response coordination. It receives notification of an emergency from a designated *competent authority* in a State or from another international organization and verifies any unconfirmed reports of an emergency. It establishes primary functional links with the 'Accident State' and any potentially affected States as appropriate, providing direct communication with the respective official national emergency response coordinating structures. It also establishes functional links with the relevant international organizations. In accordance with their mandates, these organizations may also have, or establish, relevant links and communications channels with States (including respective national focal points), other organizations or agencies and regional centres and programmes that may provide assistance.[17, 18, 19] The general framework for the interagency response coordination is shown in Fig. 1.

Depending on the nature of the event, it can be assumed that certain other international organizations with technical expertise in specific areas related to, or useful for, responding to emergencies may be contacted.

In the event of a major disaster or complex emergency associated with radiation hazards, the functions and responsibilities of this Joint Plan remain the same.

2.7.1. Emergency information exchange

States and/or international organizations inform the IAEA about an actual or potential nuclear or radiological emergency either as the fulfilment of an explicit **obligation** to do so under international treaties, an **expectation** to do so according to international safety standards or on a **voluntary** basis. The purpose is, inter alia: (1) to provide relevant information about a nuclear or radiological emergency as early as possible in order for transboundary radiological consequences to be minimized; (2) to pre-empt legitimate requests from States for assistance in obtaining information; (3) to prompt the IAEA to offer its good offices; (4) to provide advance warning to the IAEA, other participating organizations and States of a developing situation so that they can be ready to respond should the situation worsen; (5) for the IAEA, other participating

[17] The IACRNE Working Group on Air and Maritime Transportation is a group of relevant international organizations and trade associations to coordinate a collaborative response from the transport sector (specifically international air navigation and international maritime navigation) in the event of a nuclear or radiological emergency.

[18] Under the International Health Regulations (IHR (2005)), there are National IHR Focal Points in 194 States Parties with extensive binding obligations concerning reporting or verifying certain public health events to WHO, coordination with other governmental sectors and additional public health issues.

[19] Europol and INTERPOL have an operational agreement that provides for the exchange of criminal intelligence. Within the framework of this agreement, both agencies have placed Liaison Officers at their respective counterpart's Headquarters to facilitate and support the information flow between the two organizations and to encourage cooperation.

organizations and States to initiate a response and/or provide advice to the public or media on a developing situation of actual, potential or perceived radiological significance; (6) to otherwise alert the IAEA's emergency response staff.

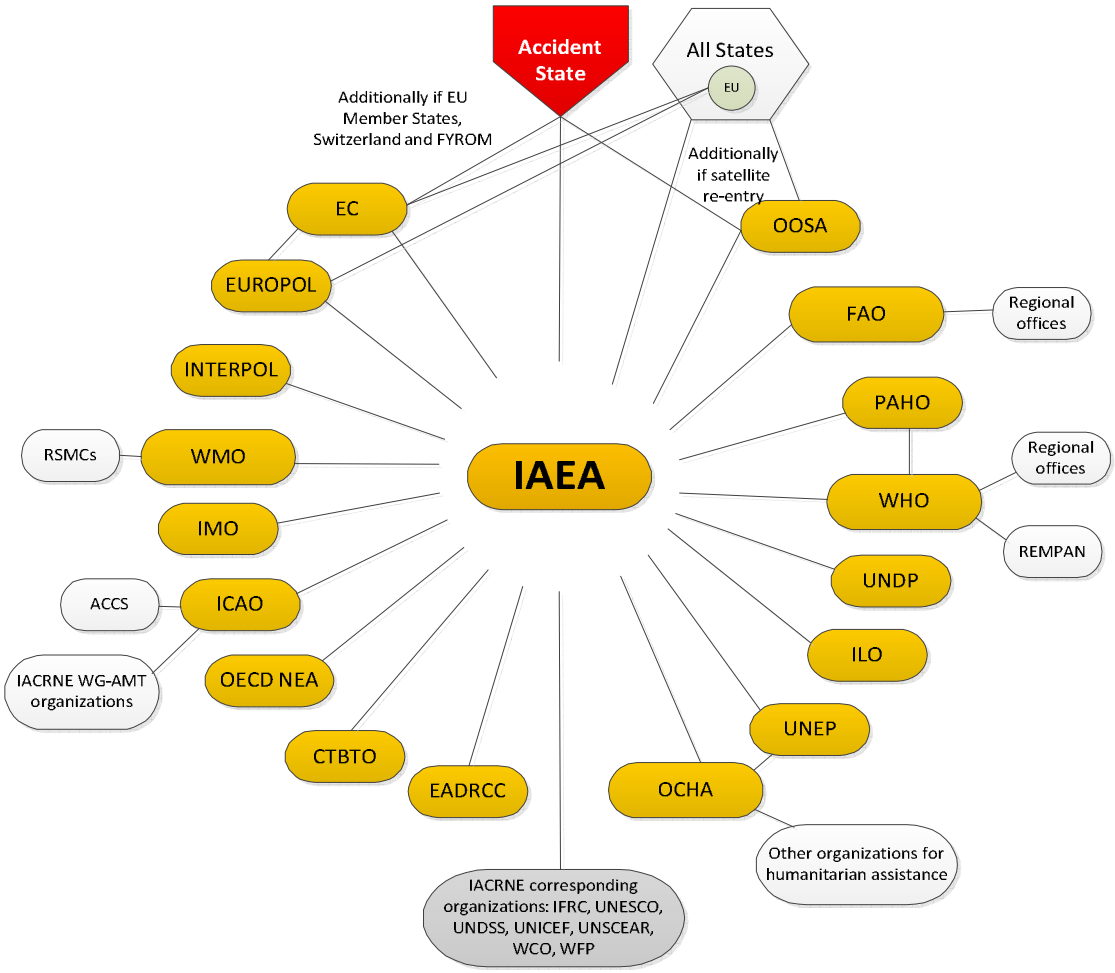

FIG. 1. Framework for the interagency response coordination to nuclear or radiological emergencies. Each participating organization may have links with the relevant authorities in its own Member States for performing its functions.

The IAEA expects to receive an initial message from a competent authority informing it about a nuclear or radiological emergency at one of two levels of formality, namely a *'notification'* or an '*advisory*':

(1) **Notification**: A message submitted to a national authority or international organization by an authorized competent authority under an international treaty or according to international safety standards providing details of an emergency or a potential emergency.

(2) **Advisory**: A message submitted to a national authority or international organization by an authorized competent authority providing details of an actual, potential or perceived nuclear or radiological emergency, without the explicit obligation or expectation to do so under an international treaty or according to international safety standards.

The concept of operations for an initial notification or advisory is illustrated in Fig. 2. The 'Accident State' sends an initial notification or advisory message to the IAEA (e.g. to its Incident and Emergency Centre (IEC)) indicating the date/time, location and

nature of the emergency (normally expected to include an emergency class and/or conditions). The IAEA authenticates/verifies the message with the competent authority of the State that issued it and takes appropriate further actions.

If the emergency causes any of the 28 Member States of the European Union, Norway, the Former Yugoslav Republic of Macedonia or Switzerland to take widespread measures to protect their population, those States will additionally notify the European Commission.

The European Commission then activates its Urgent Radiological Information Exchange system (ECURIE) and ensures that the designated *contact points* in each Member State of the European Union, Norway, the Former Yugoslav Republic of Macedonia and Switzerland are made aware of the emergency and any subsequent information related to it.

In the case of re-entry or possible re-entry of a satellite or other space object with nuclear power sources[20] on board, the launching State[21] of the satellite or space object additionally transmits notifications to other concerned States and the OOSA[22]. If a participating organization becomes aware of a possible nuclear or radiological emergency[23] for which the IAEA has not provided any official information, it informs the IAEA respecting aspects of confidentiality. If appropriate, the IAEA verifies the report with the relevant competent authorities or international organizations and requests an appropriate notification or advisory message. If the information cannot be substantiated, the IAEA reports this to the original reporter. With the aim of limiting and correcting the spread of false information, the IAEA may: inform States; post information on the IAEA's emergency web site (USIE); and/or, in coordination with the relevant States and participating organizations as appropriate, publish information on the www.iaea.org and/or issue a press release to the media.

Figure 3 provides a concept of operations for information exchange over protected web sites. Further to the initial notification, the 'Accident State' may submit additional information to the IAEA, which rapidly authenticates the source, reviews the information to ensure it is clear and not obviously in error and, respecting any confidentiality constraints, (1) provides information to States and/or relevant participating organizations; and (2) posts the information as appropriate on the IAEA's emergency web site (USIE).

States or international organizations may request support from the IAEA to obtain information. If it is available, the IAEA will provide the information, respecting confidentiality constraints. If not, it requests the 'Accident State' or other State or international organization to provide it. The participating organizations respond in a timely manner to the request and provide the information to the IAEA. Respecting any confidentiality constraints, the IAEA (1) provides the information as appropriate to the requesting State; and/or (2) posts the information as appropriate on the IAEA's

[20] Including nuclear reactors and radioisotope thermal generators.
[21] Principles Relevant to the Use of Nuclear Power Sources in Outer Space (United Nations General Assembly resolution 47/68 of 14 December 1992). For the purpose of the Principles, the 'launching State' is the State that exercises jurisdiction and control over a space object with nuclear power sources on board at a given point in time.
[22] Ibid., Principle 5.
[23] For example, the National IHR Focal Points in the 194 States Parties have binding obligations concerning reporting or verifying certain public health events to WHO.

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emergency web site (USIE), and/or 3) establishes hyperlinks to the relevant party's web site.

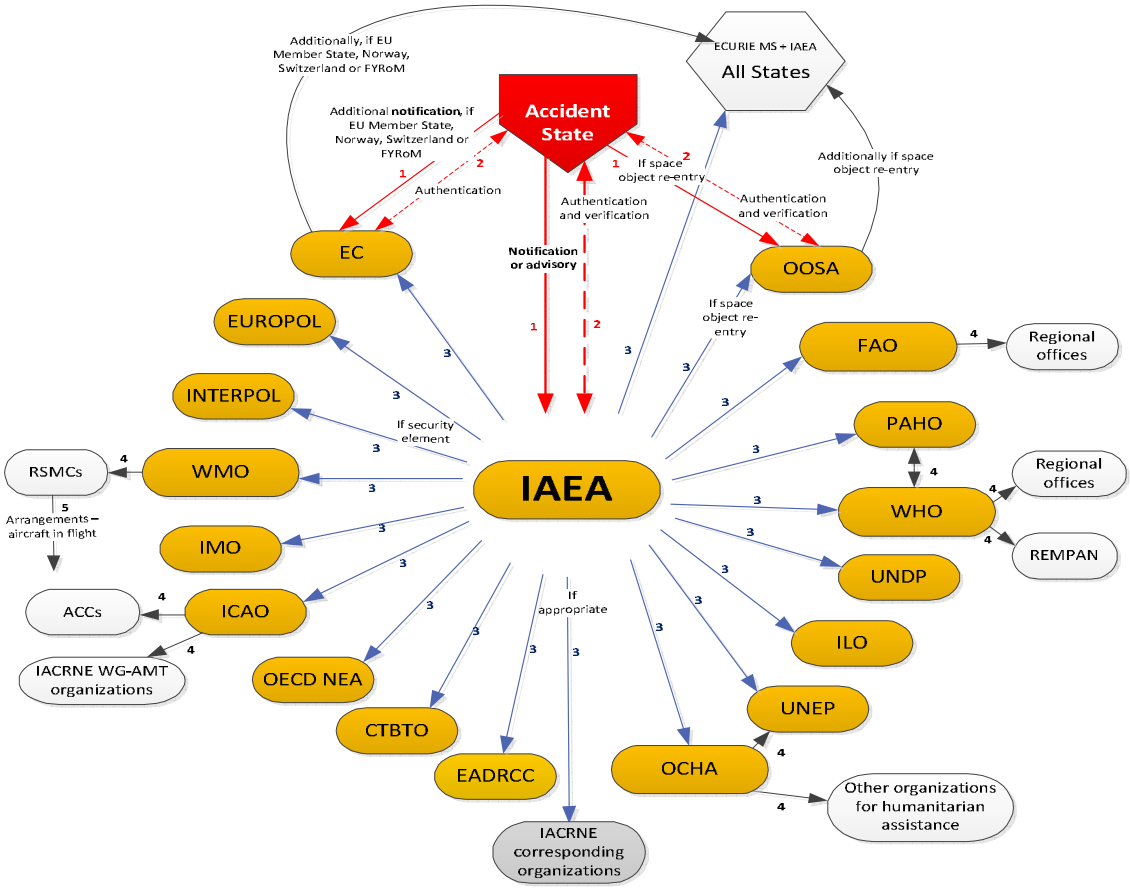

FIG. 2. Concept of operations for initial notification or advisory of a nuclear or radiological emergency. Numbers indicate the order in which information will be cascaded. In addition to the processes shown here, the 'Accident State' is normally expected to notify affected States directly. Note also that, in practice, information is disseminated from Regional Specialized Meteorological Centres (RSMCs) to Meteorological Watch Offices (MWOs) through National Meteorological Centres (NMCs).

Unless information has been provided on a confidential basis, or if the IAEA judges that it is not prudent to release information, the IAEA may extract relevant official information submitted to it and post it on the www.iaea.org public web site (see Section 3.5, Public Information). The IAEA's emergency web site (USIE) provides hyperlinks to the IAEA's public web site and to other relevant web sites.

NOTE

International organizations should clearly mark information as to whether (1) it is **for the receiving organization's use only**; (2) it is **for use by relevant authorities only**; or (3) it is **for general use** and if so, after what delay, if any. In general, information that is needed to mitigate the consequences of the emergency in other States should not be confidential, but, for example, information on patients and the exact location of found *dangerous sources* will normally only be provided on a strict need-to-know basis.

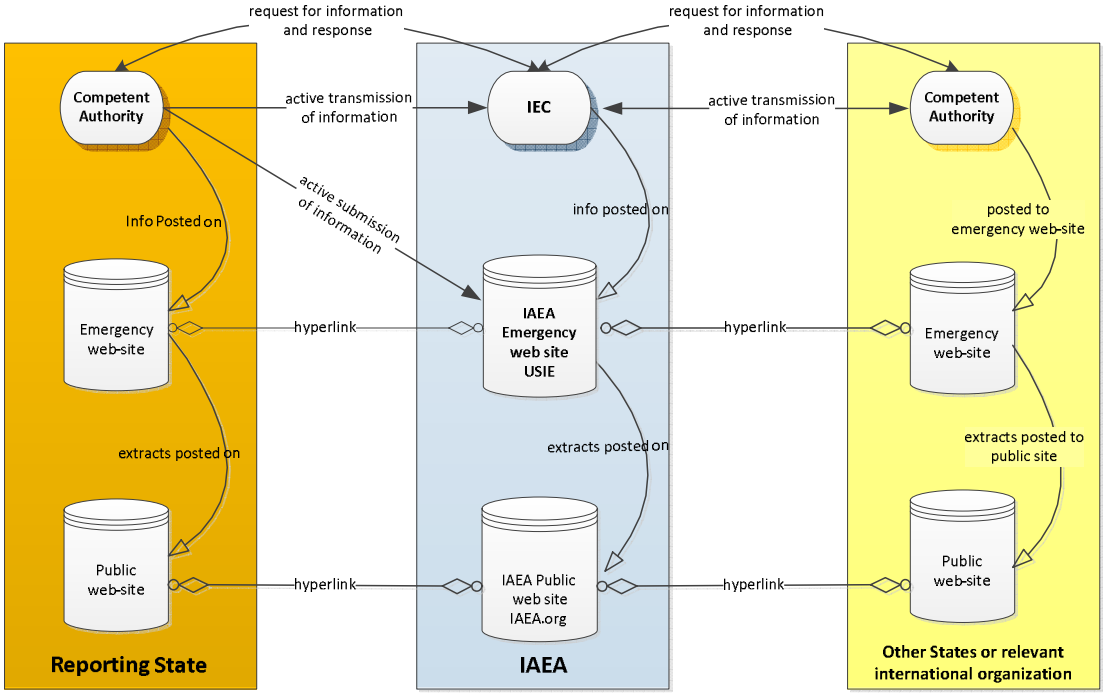

FIG. 3. Concept of operations for emergency information exchange over web sites.

2.7.2. Assessment and prognosis

Based on the information provided, the IAEA evaluates the planned and/or implemented protective actions and other response actions in the 'Accident State' to assess if they are in broad compliance with relevant international practice (IAEA safety standards). The IAEA also broadly assesses the likely emergency progression and shares the results with States and participating organizations to assist them in their own judgement of the situation.

Overviews containing information related to protective actions and likely situation development are also shared with the public. However, at no point would an assessment of the situation or prognosis of the likely emergency progression be shared with the public without the knowledge of the 'Accident State'.

In addition, the OECD NEA surveys and analyses protective and other response actions decided on or recommended by the governments other than the government of the 'Accident State', identifying patterns (if any) and findings and formulating conclusions and recommendations (if any). The IAEA posts the results of the survey on the IAEA's emergency web site (USIE).

2.7.3. International assistance

If a State requests assistance from the IAEA under the Assistance Convention, the provision of assistance will follow the IAEA's Response and Assistance Network (RANET) process: the IAEA (1) informs States and international organizations that could provide assistance; (2) evaluates the situation in coordination with relevant participating organizations, and may, in agreement with the requesting State, dispatch an initial assessment (fact finding) team; (3) develops, in coordination with the requesting State and the assisting parties, a detailed assistance action plan; and (4) upon acceptance of the plan by all involved parties, obtains authorization for the

deployment of resources from assisting competent authorities and international organizations.

Section 3

3. EMERGENCY RESPONSE

3.1. Event classification

Any nuclear or radiological emergency requires effective response commensurate with the level of actual, potential or perceived hazard. This can be accomplished through the adoption of an event/emergency classification composed of sets of conditions that trigger a certain level of response.

The emergency classification adopted for the purpose of this Joint Plan is in line with IAEA Safety Standards Series No. GSR Part 7. It addresses events specific to nuclear installations as well as all other nuclear or radiological events that warrant response.

TABLE 2. CLASSIFICATION OF NUCLEAR AND RADIOLOGICAL EVENTS

General emergency	Events resulting in an actual, or substantial risk of, release of radioactive material or radiation exposure warranting taking precautionary urgent protective actions, urgent protective actions, early protective actions and other response actions on the site and off the site.
Site area emergency	Events resulting in a major decrease in nuclear safety warranting taking protective actions and other response actions on the site and in the vicinity of the site but not sufficient to meet criteria for a 'general emergency'.
Facility emergency	Events resulting in a significant decrease in nuclear or radiation safety at the *facility* warranting taking protective actions and other response actions at the facility and on the site but not warranting taking protective actions off the site.
Alert	Events resulting in an actual or potential decrease of nuclear or radiation safety at the facility warranting taking actions to assess and mitigate, as necessary, the potential consequences at the facility.
Other events	Any other event in a facility that may trigger public concerns and or media interest.
Radiological emergency	Any event which is of actual, potential or perceived radiological significance warranting protective actions and other response action at any location and is not a nuclear emergency.

3.2. Emergency communications

3.2.1. Communication channels

Communication channels[24] include electronic mail, telephone, facsimile, videoconferencing and web sites, including the IAEA's emergency web site (USIE). They are used for:

(1) Sending notifications or requests for assistance to and from the IAEA;

[24] For details, see the EPR-IEComm manual.

(2) Sending initial messages or additional information to and from the IAEA;

(3) Communicating among and between participating organizations and their respective contact points.

Generic and non-personal contact details should be provided and maintained by all participating organizations as part of the emergency preparedness.

3.2.2. Videoconferencing

The IAEA[25] may hold IACRNE coordination meetings.[26] The objectives of coordination meetings may include:

(1) Sharing technical information about the emergency, assessment of its actual or potential consequences, prognosis of its likely progression and actions taken or planned;

(2) Coordinating activities to avoid duplication of efforts, critical gaps and any inconsistencies

(3) Coordinating and consulting regarding public information activities (media releases, public web sites, social media, situation reports, etc.) and joint press statement(s) to achieve consistent messages for the public as well as for different technical communities.

The IACRNE Secretary prepares meeting minutes of each coordination meeting, summarizing the discussions and recording the conclusions made, and distributes them for comments to all IACRNE members that attended the meeting. Agreed meeting minutes are then posted on the IACRNE web site.

3.2.3. Communicating with the IAEA

The IAEA's IEC, when activated, maintains a dedicated telephone line for communication with other *international organizations*. A liaison officer is available at the IEC for any communication between the IAEA and the international organizations.

Participating organizations should:

(1) Consult the IAEA emergency web site (USIE)[27] to obtain information on any nuclear or radiological emergency.[28] If the information is not available on the IAEA emergency web site (USIE), information should be requested from the IAEA using emergency contact details.[29]

(2) Be ready to receive and process requests for information or assistance from the IAEA. Any confidential information should be sent as a separate message clearly marked 'FOR IAEA SECRETARIAT USE ONLY'.

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[25] The initiator would usually be the IACRNE Secretary or the IAEA Incident and Emergency System Liaison Officer for international organizations.

[26] See the IACRNE standard operating procedure SOP-102 VTC meetings (Appendix F below). Videoconferencing is not to be used to request immediate verification of unconfirmed information or to request emergency information/advice.

[27] https://iec.iaea.org/usie

[28] As part of preparedness response, staff ought to be registered on the IAEA emergency web site (USIE). Staff should be familiar with EPR-IEComm and EMERCON forms.

[29] The address book is available on the IAEA emergency web site (USIE).

(3) Send copies to the IAEA, by fax or email, of official statements on the event made by the organization.

3.2.4. Ongoing liaison

In case of a nuclear or radiological emergency of such a magnitude that the response of participating organizations continues for several days or weeks and significant technical coordination is required, each relevant participating organization will consider sending a liaison officer to the IAEA headquarters in Vienna to facilitate coordination. If such an emergency requires the mobilization of major resources for humanitarian relief, the IAEA will consider sending a liaison officer to OCHA to provide technical advice for the humanitarian relief efforts.

3.3. Assessment and prognosis

The IAEA assessment and prognosis does not replace the responsibility of an 'Accident State' or of affected State(s) to perform their own assessment, implement needed protective actions and other response actions and communicate with the public.

The IAEA conducts its assessment and prognosis according to the following general process:

(1) The IAEA reviews the incoming technical information (including on-site conditions and off-site monitoring data) and, if necessary, clarifies aspects of the provided information (or requests missing information) with the contact point in the 'Accident State'. Based on this review, the IAEA evaluates whether the planned or implemented protective actions and other response actions taken by the 'Accident State' are broadly consistent with the IAEA safety standards applicable to the situation.

(2) If needed, the IAEA contacts one (or more) of the Member States (which volunteered to support this process via RANET in the preparedness phase), provides the available information and requests their support by sharing their assessment with the IAEA.

(3) Once an assessment is elaborated, the IAEA shares the results with the 'Accident State' to reach an agreement on the conclusions and to discuss any differences.

(4) With the agreement of the 'Accident State', the IAEA disseminates the conclusions of the assessment. If a common understanding and consistent message cannot be reached within a reasonable time, the IAEA Director General decides, as appropriate, on the next steps.

Because of potential difficulties in gathering technical data during an emergency, the information required for the assessment and prognosis may be delayed, and the required data may even be unavailable or unreliable in the initial stages of the emergency. Therefore, limitations and uncertainties of the results of any assessment and prognosis may be expected.

3.4. Provision of advice and assistance

Participating organizations follow their own procedures when rendering specific assistance directly to the requesting State.[30] Provision of advice or assistance through the IAEA follows the IAEA's Response and Assistance Network process.

3.4.1. Provision of technical advice

If a request by a State for advice is made of any participating organization, and the subject matter of the advice requested involves the competence of more than one organization, the organizations, to the extent possible, confer and agree on the advice to be provided. Technical advice will, to the extent possible, be in accordance with international standards and practice.[31]

Respecting any confidentiality constraints, copies of any authoritative technical advice should be sent to the IAEA for possible posting on the IAEA's emergency web site (USIE), or for establishing a hyperlink on web site USIE to the organization's web site.

3.4.2. Provision of assistance

Any participating organization that receives a request for assistance in response to a nuclear or radiological emergency will inform the IAEA and other relevant participating organizations of the request and coordinate the provision of the requested assistance with those organizations, as appropriate, according to their respective roles. Those organizations with regional structures will ensure that other relevant organizations are consulted, as appropriate, regarding any assistance to be provided through their regional and/or country offices, including the UNDP.

Without prejudice to the rights and obligations of the participating organizations, if a State requests assistance from or through the IAEA under the Assistance Convention:

(1) The IAEA informs all participating organizations and coordinates the resources of those countries that may be able to provide assistance with the requesting State.

(2) The IAEA evaluates the situation and, in coordination with relevant participating organizations, provides initial advice to the requesting State.

(3) The IAEA may send, following the RANET mechanism, an initial assistance team consisting of technical staff members and/or qualified experts according to the scope of the mission agreed on with the requesting State. The scope prescribes the objectives of the initial assistance mission (to include an evaluation of the situation and advice on additional actions needed, including resources from States Parties to the Assistance Convention or those of other relevant participating organizations), team leadership, communication protocols, media arrangements, etc.

(4) If additional actions are needed, the IAEA develops, following the RANET process, in coordination with assisting States and relevant participating organizations, an assistance action plan that includes technical, financial, legal,

[30] Such procedures should include informing the IAEA about the advice and assistance requested and/or provided.

[31] A list of relevant publications that can serve as input for the provision of technical advice during an emergency can be found in Appendix E.

diplomatic, organizational and logistic aspects, mission objectives, team leadership, communication protocols, media arrangements, etc. Upon acceptance of the assistance action plan by all parties involved, the provision of assistance is implemented. If needed, additional resources may be placed on standby.

(5) Upon termination of assistance, resources are demobilized.

The requesting State is responsible for the overall direction, support and supervision of any assistance within its territory.

3.5. Public information

Any public information, including media releases, interviews, social media and situation reports, issued by the participating organizations will be factual and based on the role and responsibilities of, and actions taken by, the organization. Where the subject matter of the media release, interviews, social media postings or reports involves the competence of more than one organization, the organizations coordinate, consult with each other and reach an agreement, in a timely manner and to the extent possible, on the content or ensure that their respective media releases contain consistent messaging and information.[32] Should this not be possible, the organizations should limit their public information outputs to their own area of competence.

Any assisting organization will make every effort to obtain clearance with a requesting State or organization before releasing information to the media/public on the assistance provided (in connection with a nuclear or radiological emergency). Web addresses or copies of any releases/reports should be provided to the IAEA for posting on the IAEA's emergency web site (USIE), or for establishing a hyperlink on web site USIE to the organization's web site.

The IACRNE maintains a list of the contact details of the public information officers (PIOs) in all participating organizations.

3.6. Emergency deactivation

States have the responsibility for determining when an emergency situation has been terminated at the national level. With respect to the IAEA, when the emergency is deemed under control and the situation has been stabilized, the IAEA informs those contact points that have been activated that the IAEA is deactivating, and posts its status on the IAEA's emergency web site (USIE). Other organizations will deactivate according to their respective criteria, and prepare for any ongoing activities as part of long term recovery.

3.7. Post-emergency follow-up

At the request of one of the participating organizations, the IACRNE Secretary consults with other participating organizations with a view to convening one or more special IACRNE meetings. The objectives of such meetings will include the following:

[32] See the IACRNE standard operation procedure SOP-104 Public Communication (Appendix F, below).

(1) Sharing of technical information on consequences and actions taken or planned in this regard;

(2) Coordination of follow-up activities of the participating organizations (consistent with their mandates) to avoid critical gaps, duplication of efforts and inconsistencies;

(3) Analysis and documentation of lessons identified in the emergency response, and planning and implementation of actions to systematically address these lessons in the context of the Joint Plan.

3.8. Participating organizations' response actions

Six sets of emergency conditions are used to describe various events or situations that warrant response actions under this Joint Plan.

Major response actions that are expected from participating organizations in each emergency class are described in the following tables. Actions are grouped under:

(1) Initial notification/advisory message;
(2) Information exchange;
(3) Assessment and prognosis;
(4) Provision of advice or assistance;
(5) Public information.

In case the emergency is triggered by a nuclear security event, additional major response actions are grouped under 'Additional Response Actions' at the end of this section.

Emergency Class: GENERAL EMERGENCY	
Description:	An actual, or substantial risk of, release of radioactive material or radiation exposure warranting taking precautionary urgent protective actions, urgent protective actions, early protective actions and other response actions on the site and off the site. This includes: actual or projected severe core damage; potential for doses off the site warranting implementation of urgent protective actions; or a nuclear security event resulting in an inability to monitor or control critical safety functions needed to protect the core of a nuclear reactor or large amounts of spent fuel, or needed to prevent an unplanned criticality that could expose people off the site.
Obligation:	If a release of radioactive material occurs or is likely to occur and results or may result in a *transnational emergency*, States Parties to the Early Notification Convention **are obliged to forthwith notify** potentially affected States and the IAEA, **provide relevant information** and **respond to requests for information** from affected States.
Expectation:	States not parties to the Early Notification Convention, in order to meet the requirements of the IAEA Safety Standards Series No. GSR Part 7, are **expected to notify**, **provide relevant information** and **respond to requests for information**.
Voluntary action:	N/A
Recommendation:	States should comply with response time objectives set out in IAEA Safety Standards Series No. GS-G-2.1

Emergency Class: GENERAL EMERGENCY	
Response actions	
Initial notification and information exchange	
IAEA	- Authenticates initial notification and verifies the content with the *notifying State* - Offers good offices to the notifying State - Establishes 24/7 response mode and dedicated communication lines, including phone, fax and email, with the notifying State (full response mode) - Establishes liaison with the notifying State - Forthwith informs States that may be physically affected and all international organizations - Initiates coordinated interagency response - Publishes initial notification on IAEA's emergency web site (USIE), including any attachments and/or links to the notifying State's web site - Sends copy of the initial notification by fax to all States - Sends email to Zone 1 States[33] and to relevant international organizations, requesting them to access the IAEA's emergency web site (USIE) and confirm receipt of the notification - Calls Zone 1 States and international organizations that have not confirmed receipt of the notification on IAEA's emergency web site (USIE) - Establishes phone liaison with the Zone 1 States - Establishes phone liaison with other States (Zone 2 States) and relevant international organizations
EADRCC	- Promptly forwards initial notification received from the IAEA to civil protection organizations in allied and partner countries by email - Appoints a duty officer to handle related communications on a 24/7 basis
EC	- Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that ECURIE Member States & the IAEA are aware of its existence by means of a dedicated callout system - Activates an Emergency Team to handle related communications on a 24/7 basis - Contacts any ECURIE Member State who has not responded via the web site within one hour of callout - Requests EURDEP Member States to put their environmental monitoring systems into emergency mode - May activate RESPEC[34] technical support arrangements - Maintains EU Civil Protection & Humanitarian Aid mechanism on standby in case of assistance request - May commence a process to evaluate whether there is a potential for contaminated food and feed reaching the market
EUROPOL	- May be put on standby in case of actual or suspected nuclear security event

[33] States within 1000 km of the NPP or 50 km from the research reactor that declared a 'general emergency'.
[34] RESPEC is a contractual arrangement between the EC and another competent party to provide information and services to the Commission in the event of a radiological emergency; see Appendix D.

Emergency Class: GENERAL EMERGENCY	
Response actions	
FAO	- Assigns liaison officers (AGE) to the IAEA in Vienna - Puts Nuclear Emergency Crisis Network of Technical Experts (ECN) on standby - Assesses initial impact on food production and distribution systems, including potential measures to restrict food consumption
INTERPOL	- May be put on standby in case of actual or suspected nuclear security event
IMO	- May be put on standby if impacts/contamination to vessels at sea or in ports is possible
PAHO	- Interacts with national health authorities concerned, including through International Health Regulations 2005 (IHR (2005))[35] communication channelsAlerts all organizational levels, relevant staff and regional expert networksActivates the Institutional Response Plan
OCHA	- Declares standby and mobilizes its emergency tools and services in case of a natural disaster or complex emergency where humanitarian assistance is envisaged
UNDP	- Authenticates initial notification (in case it does not come from the IAEA) - Offers good offices (if emergency is in a country with UNDP presence) in the area of UNDP's mandate - Appoints duty officer
WHO	- Activates WHO emergency response plan, alerts (IHR) National Focal Points, WHO Regional and Country Offices, puts the relevant expert networks on standbyGathers additional information to initially assesses potential public health implicationsAssigns a liaison officer to the IAEA and considers and plans for additional steps as appropriate, including fulfilment of the notification requirements under IHR (2005) provisions and dissemination of information to States Parties
WMO	- Activates and retransmits[36] initial notification received from the IAEA to all States' National Meteorological and Hydrological Services (NMHSs)
ICAO	- May be put on standby and may activate the IACRNE ad hoc Working Group on Air and Maritime Transportation if significant atmospheric radioactive release is projected or envisaged to impact international air navigation and/or international maritime navigation
IAEA	- Authenticates the message and verifies the content with the notifying State - Publishes further information on IAEA's emergency web site (USIE), including any attachments and/or links to notifying State's own web site - Distributes further information by fax - Compiles and analyses information, assesses potential radiological consequences and anticipates possible event progression, advises States and international organizations
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board - Where a potential for contaminated food and feed reaching the market is deemed likely, may impose appropriate urgent restrictions on EU Member States to prevent such produce reaching the market
FAO	- Assumes contact with the relevant FAO representative if there is one in the country, and passes on any relevant information to AGE - May request the notifying State to provide information on food production and distribution systems and consumption restrictions in areas affected by the emergency
PAHO	- Continues maintaining communication throughout the organizational levels and with national authorities, including through IHR channels
WHO	- Contacts with National IHR Focal Point in the affected State PartyContinues close liaison between HQ, Regional and Country Offices involvedEnsures timely receipt of adequate information for public health risk assessment and assessment of assistance needs, when requestedConsiders dissemination of information as appropriate to States Parties and others, including on WHO secure web sites — Event Information Site (EIS) and Event Management Site (EMS) - Continues public health surveillance and risk assessment
WMO	- Retransmits[36] relevant information received from the IAEA to all NMHSs
Further notification in case of radioactive release in the environment (or change in emergency classification)	

[35] WORLD HEALTH ORGANIZATION, International Health Regulations (2005), 2nd ed., WHO, Geneva (2008), available at: http://www.who.int/ihr/IHR_2005_en.pdf.

[36] As a backup to the IAEA report of the notification and in order to speedily activate meteorological support.

Emergency Class: GENERAL EMERGENCY	
Response actions	
IAEA	- Authenticates notification and verifies the content with the notifying State - May request the notifying State to provide more information - Publishes notification message on IAEA's emergency web site (USIE), including any attachments and/or links to the notifying State's web site - Sends copy of the notification message by fax to all States and international organizations - Sends email to Zone 1 States, and to international organizations requesting them to access IAEA's emergency web site (USIE) and confirm receipt of notification - Calls Zone 1 States, and international organizations that have not confirmed receipt of notification on IAEA's emergency web site (USIE) - Offers its good offices to States that may be physically affected
EADRCC	- May advise allied and partner countries to verify information provided in the *CBRN Inventory* and to raise readiness levels of assets and capabilities for radiological emergency response
EC	- Ensures the availability of WebECURIE, where the notifying State can place all further information on the national and event status board - May issue an ADVISORY to draw attention to important new information regarding the emergency - Where a potential for contaminated food and feed reaching the market is deemed likely, may impose urgent restrictions on EU Member States
FAO	- Maintains readiness to support the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (AGE) in the early phases if requested - Compiles information on food contamination and publishes information on USIE webpage (if relevant) along with recommendations on management options - May advise Member States on the implementation of food inspection and monitoring in food, agriculture, forestry and fisheries - May participate in the response mode and provide technical support to the affected State, with emphasis on agricultural countermeasures and protection of the food supply
ICAO	- Based on information received from the responsible WMO Regional Specialized Meteorological Centre(s) RSMC(s) and the Volcanic Ash Advisory Centre (VAAC) London (co-located with WMO RSMC Exeter), informs/alerts aircraft in flight and aerodromes concerned about atmospheric release - Advises aircraft in flight on possible alternate routes - Activates the IACRNE ad hoc Working Group on Air and Maritime Transportation - Provides advice, on request, to States on the effects of contamination/radiation exposure on airline personnel (including flight crews) and passengers, and the movement of passengers and/or cargo through international aerodromes
IMO	- Informs/alerts Member States and NavArea Coordinators of an atmospheric release that may impact vessels at sea or in port - Advises crews of vessels at sea or in port on possible response actions
PAHO	- Continues as above
WHO	- Continues as above - Activates WHO experts networks: Radiation Emergency Medical Preparedness and Assistance Network (REMPAN), BioDoseNet, International Food Safety Authorities Network (INFOSAN), as appropriate - Considers deploying liaison officer to IAEA Headquarters
WMO	- Retransmits relevant information received from the IAEA to all NMHSs
Request for information	
IAEA	- May request notifying State to provide more information and/or link to emergency web site (USIE) - May request information on monitoring results and protective actions from Zone 1 States - May request information from other international organizations
FAO	- May request additional information from the IAEA or affected State(s) as necessary for emergency response measures related to food and agriculture
ILO	- May request additional information from the IAEA or affected State(s) as necessary related to occupational radiation protection
UNDP	- May request additional information from the IAEA or affected State(s) as necessary
EC	- May request notifying State to provide more information and/or access to authority web site - Deals with the request using EC resources and support arrangements with external partners - May seek the advice of, or request information from, the IAEA or other international organization - May publish the request and the response on WebECURIE and may forward them to the IAEA for publishing on USIE

Emergency Class: GENERAL EMERGENCY	
Response actions	
WHO	- May deploy a liaison officer and/or request additional information from IAEA, other international organizations and/or affected State(s) as necessary to facilitate IHR notifications and public health response
Other	- May submit requests for information to the IAEA
IAEA	- Authenticates received messages and verifies the content with the reporting States - Compiles received information on monitoring results and protective actions - Publishes summary on IAEA's emergency web site (USIE) - Sends summary by fax to all States and relevant international organizations (backup option)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the relevant States or international organizations - Collates replies and informs requesting contact points - Publishes replies on IAEA's emergency web site (USIE) if there is a sufficient number of requests for information - Publishes advisory message on the IAEA's emergency web site (USIE) if there is a need to address rumours - Establishes hyperlinks on IAEA's emergency web site (USIE) to other international organizations' emergency web sites providing relevant information
Other	- Informs the IAEA about major response actions
Assessment and prognosis	
IAEA	- Based on provided information evaluates recommended/planned/implemented protective actions and other response actions to assess whether they are in broad compliance with relevant IAEA safety standards - Broadly assesses likely emergency progression - Shares results with States and relevant international organizations - Repeats the process when new information becomes available
NEA	- Surveys and analyses protective and other response actions decided on or recommended by the governments other than the government of the 'Accident State'
Other	- None
Meteorological products	
IAEA	- Requests and receives meteorological and atmospheric dispersion/transport predictions from the appropriate WMO Lead RSMCs, may also request high resolution meteorological and atmospheric dispersion/transport predictions for near field - Sends a copy of the request to other RSMCs and Regional Telecommunications Hub (RTH) Offenbach - Publishes meteorological products only from WMO Lead RSMCs on IAEA's emergency web site (USIE) - Distributes products by fax to all States and international organizations (backup option)
WMO Lead RSMCs	- Generate basic products based on IAEA request parameters, or with default scenario parameters for those that are not provided - When the IAEA requests it, distribute products to designated Operational Contact Points of NMHSs in their respective WMO Regions of responsibility, and to WMO Headquarters - Disseminate[37] the information to ICAO meteorological watch offices (MWOs) and world area forecast centres (WAFCs)
WMO RSMCs (non-lead)	- Generate basic products based on IAEA request parameters, or with default scenario parameters if none are provided - When the IAEA requests it, distribute products to the designated Operational Contact Points of NMHSs in their respective WMO Regions of responsibility, and to WMO Headquarters - Disseminate[37] the information to ICAO MWOs and WAFCs
EC	- Publishes any received meteorological information, dispersion or transport predictions on WebECURIE - May request support contractors to provide additional information
Monitoring results	
IAEA	- May request CTBTO to provide monitoring results from its global monitoring network of radionuclide stations - May request States and international organizations to provide their results of environmental monitoring
EC	- Ensures the availability of the latest environmental monitoring data through the EURDEP data exchange

[37] In practice, this information is disseminated to the MWOs through the designated Operational Contact Points of NMHSs and to the WAFCs London and Washington through the RSMCs Exeter and Washington, respectively.

Emergency Class: GENERAL EMERGENCY	
Response actions	
	platform - Requests EURDEP Member States (36 countries) to put their environmental monitoring systems into emergency mode in order to ensure that the latest information is always available from 5000 automatic environmental monitoring stations
CTBTO	- Provides global monitoring results (radionuclide air concentrations) and related expertise
Request for advice or assistance	
IAEA	- Receives requests for advice or assistance under the Assistance Convention, informs relevant international organizations that may be able to provide assistance and coordinates the resources to be allocated - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to the requesting State - May deploy a field response team (fact finding mission) in agreement with the requesting State - Develops a comprehensive assistance action plan in coordination with the requesting State, assisting States and international organizations, as appropriate - Coordinates the implementation of the assistance action plan and may place on standby additional resources *The provision of international assistance follows the IAEA Response and Assistance Network (RANET) process*
PAHO	- Coordinates with the organizational levels concerned, with relevant WHO major offices, and activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
WHO	- Follows the arrangements under IHR (2005) and offers technical assistance to the State, keeps the IAEA informed - Receives requests for advice or assistance from the Accident State and neighbouring countries and coordinates with relevant IOs, ROs, COs and WHO expert networks as necessary
OCHA	- Receives request for international humanitarian assistance from affected State
ILO	- Receives requests for advice or assistance on the protection of occupationally exposed workers
EC	- Maintains its system for dealing with humanitarian aid requests active on a 24/7 basis - Forwards received requests to EU Member States via its dedicated platform - Coordinates the responses from Member States received - May send a team to the requesting country to coordinate on a local level the distribution of aid
UNDP	- Informs the IAEA and potential donor countries on received request for assistance in early recovery and/or long term development - Coordinates the provision of requested assistance with relevant international organizations and donor(s) - Supports the governments in early recovery and development strategies and implementation - May deploy a field team in agreement with the requesting State
Other	- Informs the IAEA and other international organizations as appropriate about request for assistance received - Coordinate the provision of requested assistance with relevant organizations, as appropriate, according to their respective roles[38] *Any assisting organization will make every effort to obtain clearance with a requesting State before releasing information to the media/public on the assistance provided*
Public information	
IAEA	- Publishes notifying State press releases or URL of public web site on IAEA's emergency web site (USIE) - Establishes liaison with the official media focal points in the notifying State and relevant international organizations as appropriate to coordinate the release of information to the media - Issues press release(s) and posts on the IAEA's public web site detailing emergency and actions taken - Shares with the public overviews containing information related to protective actions and likely situation development *At no point would an assessment of the situation or prognosis of likely emergency progression be shared with the public without the knowledge of the 'Accident State'*
EC	- The European Commission Directorate General for Energy (DG ENER) prepares a draft press release and forwards it to the notifying/Accident State for information/comment with time limit for feedback - Has draft press releases checked for accuracy/suitability by an independent party under technical support arrangements of the Radiological Emergency Support Programme for the European Commission (RESPEC) - May additionally provide draft press release to IAEA for comment with time limit for feedback

[38] Those organizations with regional structures will ensure that other relevant organizations are consulted regarding any assistance to be provided through their regional offices, including the UNDP.

Emergency Class: GENERAL EMERGENCY	
Response actions	
	- Publishes press release from Commission press office and on WebECURIE
OCHA	- In the event of a natural disaster or complex emergency, will issue humanitarian messaging, lead advocacy and produce and coordinate situation reports as required
ILO	- Provides information to the ILO constituents in the area of its mandate
UNDP	- Provides information to the media in the area of its mandate
PAHO	- Prepares postings for the public web site and interacts with the public and the media through additional channels, including social networks
WHO	- Provides information to the States and the public by liaising with mass media, producing press releases, media statements, briefings, publishing information on WHO official web site and using official social media channels detailing potential and actual risks to human health and explaining the interventions undertaken and, as the emergency evolves, takes all practical steps not to conflict with provided information from other IACRNE members - If necessary, may prepare an independent press release (limited to the area of WHO's mandate), media statements, FAQs, fact sheets, etc. and share the press release content with the IAEA and other relevant IACRNE members
All	- Whenever possible issue coordinated press releases/media advisories, or limit those to the areas of their respective mandates[39] - Submit copies of any press releases to the IAEA or submit URL of public web site

[39] Such as joint press releases/media advisories relating to international air navigation and/or international maritime navigation, as coordinated by the IACRNE ad hoc Working Group on Air and Maritime Transportation.

Emergency Class: SITE AREA EMERGENCY	
Description:	A major decrease in nuclear safety warranting taking protective actions and other response actions on the site and in the vicinity of the site but not sufficient to meet the criteria for 'general emergency'. This includes: a major decrease in the level of protection provided to the core of a nuclear reactor or large amounts of spent fuel; conditions where any additional failures could result in a 'general emergency'; doses off the site approaching criteria for urgent protective actions (e.g. from a release of radioactive materials, direct exposure or a criticality); nuclear security event with the potential to disrupt performance of critical safety functions or to result in a severe release of radioactive material.
Obligation:	There is **no obligation** on States Parties by virtue of the Early Notification Convention to notify the IAEA or other States of conditions representing a 'site area emergency'.
Expectation:	There is **no specific requirement** under the IAEA Safety Standards Series No. GSR Part 7 to report conditions representing a 'site area emergency'.
Voluntary action:	A State may send an **advisory message** to the IAEA regarding a 'site area emergency' in order: (1) to pre-empt legitimate requests from other States for assistance in obtaining information; (2) to prompt the IAEA to offer its good offices; (3) to provide advance warning to the IAEA, other relevant organizations or other States of a developing situation so that they can be ready to respond should the situation worsen; (4) for the IAEA, other relevant international organizations or other States to initiate an administrative response and/or to provide advice to their governments, the public or the media on a developing situation of actual, potential or perceived radiological significance; 5) to otherwise alert IAEA response staff.
Recommendation:	The IAEA Secretariat **strongly encourages** States to inform the IAEA of a 'site area emergency'.

Emergency Class: SITE AREA EMERGENCY	
Response actions	
Initial advisory message and information exchange	
IAEA	- Authenticates initial notification and verifies the content with the reporting State - Offers good offices to the reporting State - Establishes basic response mode - Establishes liaison with the reporting State - Unless otherwise instructed by the reporting State publishes advisory message on IAEA's emergency web site, including any attachments and/or links to the reporting State's web site - Sends copy of the advisory message by fax to all States and international organizations - Sends email to Zone 1 States[40], and to relevant international organizations requesting them to access the IAEA's emergency web site (USIE) and confirm receipt of the advisory message - Calls Zone 1 States and international organizations that have not confirmed receipt of the advisory message on the IAEA's emergency web site (USIE) - Establishes phone liaison with the Zone 1 States
EC	- Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system - Contacts any ECURIE Member State that has not responded via the web site within one hour of callout when the notification is of ECURIE ALERT level - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May commence a process to evaluate whether there is a potential for contaminated food and feed reaching the market - May activate RESPEC technical support arrangements
EUROPOL	- May be put on standby in case of actual or suspected nuclear security event
INTERPOL	- May be put on standby in case of actual or suspected nuclear security event
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsAlerts relevant organizational levels and staff
WHO	- Alerts respective WHO Regional and Country Offices and continues monitoring the situation

[40] States within 1000 km from the NPP or 50 km from the research reactor that declared the 'site area emergency'.

Emergency Class: SITE AREA EMERGENCY	
Response actions	
	- Disseminates information received from IAEA to States Parties as appropriate
WMO	- Activates, and retransmits[41] to all NMHSs initial advisory message received from the IAEA
Other	- None
Further information from the reporting State	
IAEA	- Authenticates the message and verifies the content with the reporting State - Publishes further information on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's own web site - Distributes further information by fax - Compiles and analyses information, assesses potential radiological consequences and anticipates possible event progression; advises States and international organizations
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
PAHO	- Continues maintaining communication throughout the organizational levels and with national authorities, including through IHR channels
WHO	- Promptly shares the information with the relevant regional and country office - Takes additional steps as necessary, according to the IHR (2005) notification requirements
WMO	- Retransmits[42] to all NMHSs relevant information received from the IAEA
Request for information	
IAEA	- May request reporting State to provide more information and/or link to emergency web site (USIE)
Other	- May submit requests for information to the IAEA
IAEA	- Compiles information received from the reporting State - Publishes summary on the IAEA's emergency web site (USIE) - Sends summary by fax to all States and relevant international organizations (backup option)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the reporting State - Collates replies and informs requesting contact points - Publishes replies on the IAEA's emergency web site (USIE) if there is a sufficient number of requests for information - Publishes an advisory message on the IAEA's emergency web site (USIE) if there is a need to counter false rumours
EC	- May request the notifying State to provide more information and/or access to authority web site - Deals with the request using EC resources and support arrangements with external partners - May seek the advice of, or request information from, the IAEA or other international organization - May publish the request and the response on WebECURIE and may forward them to the IAEA for publishing on the IAEA's emergency web site (USIE)
Other	- Informs the IAEA about any additional information they may be aware of
Assessment and prognosis	
IAEA	- Based on information provided evaluates on-site protective actions (if any) and other response actions to assess whether they are in broad compliance with relevant IAEA safety standards - Broadly assesses likely emergency progression (if applicable) - Shares results with States and relevant international organizations - Repeats the process when new information becomes available
NEA	- Surveys and analyses protective and other response actions decided on or recommended by the governments other than the government of the 'Accident State'
Other	- None
Request for advice and assistance	
IAEA	- Receives requests for advice or assistance and informs relevant international organizations that may be able to provide assistance - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to requesting State - May place on standby additional resources

[41] As a backup and in order to provide rapid meteorological support.
[42] As a backup and in order to speedily activate meteorological support.

Emergency Class: SITE AREA EMERGENCY	
Response actions	
	- May deploy a fact finding mission in agreement with the requesting State *The provision of international assistance follows the IAEA Response and Assistance Network (RANET) process*
EC	- Maintains its system for dealing with humanitarian aid requests active on a 24/7 basis - Forwards received requests to EU Member States via its dedicated platform - Coordinates the responses from Member States - May send a team to the requesting State to coordinate on a local level the distribution of aid
PAHO	- Coordinates with the organizational levels concerned and with relevant WHO major offices; activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
WHO	- Follows the arrangements under IHR (2005) and offers technical assistance to the State, keeps IAEA informed - Receives requests for advice or assistance from the accident State and neighbouring countries and coordinates with a relevant IOs, ROs, COs and WHO expert networks as necessary
Other	- Inform the IAEA and other international organizations about request for advice received - Coordinate the provision of requested advice with relevant organizations, as appropriate, according to their respective roles
Public information	
IAEA	- Publishes reporting State press releases or URL of public web site on the IAEA's emergency web site (USIE) - Establishes liaison with the official media focal points in the reporting State and relevant international organizations as appropriate to coordinate release of information to the media - Issues press release(s) and posts them on the IAEA's public web site, detailing the emergency and the role and actions taken by the IAEA - May share with the public overviews containing information related to on-site protective actions (if any) and likely situation development
EC	- DG ENER prepares a draft press release and forwards it to the notifying/'Accident State' for information/comment, with time limit for feedback - Has draft press releases checked for accuracy/suitability by an independent party under RESPEC technical support arrangements if activated - May additionally provide draft press release to IAEA for comment, with time limit for feedback - Publishes press release from Commission press office and on WebECURIE
PAHO	- Assesses risk communication needs on an ad hoc basis and interacts with the public and the media through the channels deemed most appropriate
WHO	- May prepare an independent press release (limited to the area of WHO's mandate), media statements, FAQs, fact sheets, etc. and share the press release content with the IAEA and IACRNE members
All	- Whenever possible, issue coordinated press releases/media advisories, or limit them to the areas of their respective mandates - Submit copies of any press releases to the IAEA or send/submit URL of public web site

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Emergency Class: FACILITY EMERGENCY	
Description:	A significant decrease in nuclear or radiation safety at the facility warranting taking protective actions and other response actions at the facility and on the site, but does not warrant taking protective actions off the site. This includes: fuel handling emergency; in-facility fire or other emergency not affecting safety systems; loss of shielding or control for a large gamma emitter or spent fuel; nuclear security events resulting in hazardous on-site conditions but with no potential of resulting in a criticality or release of the radioactive material off-site that would warrant urgent protective actions off-site.
Obligation:	There is **no obligation** on States Parties by virtue of the Early Notification Convention to notify the IAEA or other States of conditions representing a 'facility emergency'.
Expectation:	There is **no specific requirement** under the IAEA Safety Standards Series No. GSR Part 7 to report conditions representing a 'facility emergency'.
Voluntary action:	A State may send an **advisory message** to the IAEA regarding a 'facility emergency' in order: (1) to pre-empt legitimate requests from States for assistance in obtaining information; and (2) for the IAEA, other relevant international organizations or other States to provide advice to their governments, the public or the media on a situation of perceived radiological significance.
Recommendation:	The IAEA Secretariat **encourages** States to inform the IAEA of a 'facility emergency', especially if the event may trigger (or has triggered) public concerns and/or wide media interest or in case of an actual or suspected nuclear security event.

Emergency Class: FACILITY EMERGENCY	
Response actions	
Initial advisory message and information exchange	
IAEA	- Authenticates initial notification and verifies the content with the reporting State - Offers good offices to the reporting State - Establishes basic response mode - May establish liaison with the reporting State - May publish advisory message on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's web site, unless otherwise instructed by the reporting State
EC	- Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May activate RESPEC technical support arrangements
EUROPOL	- May be put on standby in case of actual or suspected nuclear security event
INTERPOL	- May be put on standby in case of actual or suspected nuclear security event
Further information from the reporting State	
IAEA	- Authenticates the message and verifies the content with the reporting State - Publishes further information on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's own web site - Compiles and analyses information, assesses potential radiological consequences and anticipates possible event progression; advises States and international organizations - Uses fax for distribution of further information only if warranted or as a backup option
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
Request for information	
IAEA	- May request reporting State to provide more information and/or link to emergency web site (USIE)
EC	- May request notifying State to provide more information and/or access to authority web site - Deals with the request using EC resources and support arrangements with external partners - May seek the advice of, or request information from, the IAEA or other international organization - May publish the request and the response on WebECURIE
Other	- May submit requests for information to the IAEA
IAEA	- Compiles information received from the reporting State - Publishes summary on the IAEA's emergency web site (USIE) unless otherwise instructed by the reporting State

Emergency Class: FACILITY EMERGENCY	
Response actions	
	- Sends summary by fax to all States and relevant international organizations (backup option)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the reporting State - Collates replies and informs requesting contact points - Publishes replies on the IAEA's emergency web site (USIE) if there is a sufficient number of requests for information - Publishes an advisory message on the IAEA's emergency web site (USIE) if there is a need to counter false rumours
Other	- Informs IAEA about any additional information they may be aware of
Assessment and prognosis	
IAEA	- Based on provided information evaluates on-site protective actions (if any) and other response actions - Broadly assesses likely emergency progression (if applicable) - May share results with States and relevant international organizations - Repeats the process when new information becomes available
Request for advice or assistance	
IAEA	- Receives requests for advice or assistance and informs relevant international organizations that may be able to provide advice - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to requesting State - May deploy a field response team in agreement with the requesting State *The provision of international assistance follows the IAEA Response and Assistance Network (RANET) process*
EC	- Maintains its system for dealing with humanitarian aid requests active on a 24/7 basis - Forwards received requests to EU Member States via its dedicated platform - Coordinates the responses from Member States
Other	- Informs the IAEA and other international organizations about request for advice received - Coordinates the provision of requested advice with relevant organizations, as appropriate, according to their respective roles
Public information	
IAEA	- Publishes reporting State press releases or URL of public web site on the IAEA's emergency web site (USIE) - Establishes liaison with the official media focal points in the reporting State and relevant international organizations as appropriate to coordinate release of information to the media - Issues press release(s) and posts them on the IAEA's public web site detailing the emergency and the role and actions taken by the IAEA - May share with the public overviews containing information related to on-site actions and likely situation development
EC	- DG ENER may prepare a draft press release and forward it to the notifying/'Accident State' for information/comment, with time limit for feedback - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC technical support arrangements if activated - May additionally provide draft press release to IAEA for comment, with time limit for feedback - Publishes press release from Commission press office and may publish on Web- ECURIE.
All	- Whenever possible issue coordinated press releases/media advisories, or limit those to the areas of their respective mandates - Submit copies of any press releases to the IAEA or send/submit URL of public web site

Emergency Class: ALERT	
Description:	An actual or potential decrease of nuclear or radiation safety at the facility warranting taking actions to assess and mitigate, as necessary, the potential consequences at the facility. This includes events such as fires, natural external hazards, human errors, threats of nuclear security events, instrumentation failures, etc. with the potential to result in degradation of safety systems.
Obligation:	There is **no obligation** on States Parties by virtue of the Early Notification Convention to notify the IAEA or other States of conditions representing an 'alert'.
Expectation:	There is **no specific requirement** under the IAEA Safety Standards Series No. GSR Part 7 to report conditions representing an 'alert'.
Voluntary action:	A State may send an **advisory message** to the IAEA regarding an 'alert' in order: (1) to pre-empt legitimate requests from States for assistance in obtaining information; (2) to provide advance warning to the IAEA, other relevant organizations or States of a developing situation so that they can be ready to respond should the situation worsen; and (3) for the IAEA, other relevant international organizations or States to provide advice to their governments, public or media on a situation of perceived radiological significance.
Recommendation:	The IAEA Secretariat **encourages** States to inform the IAEA of an 'alert' if the event may trigger (or has triggered) public concerns and/or wide media interest.

Emergency Class: ALERT	
Response actions	
Initial advisory message and information exchange	
IAEA	- Authenticates initial notification and verifies the content with the reporting State - May offer good offices to the reporting State - May establish liaison with the reporting State - May advise States and international organizations - May publish advisory message on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's web site, unless otherwise instructed by the reporting State
EC	- Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States & the IAEA are aware of its existence by means of a dedicated callout system - May activate RESPEC technical support arrangements
Further information from the reporting State	
IAEA	- Authenticates the message and verifies the content with the reporting State - May publish further information on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's own web site, unless otherwise instructed by the reporting State - May compile and analyse information, assess potential radiological consequences and anticipate possible event progression and may advise States and international organizations - Uses fax for distribution of further information only if warranted or as a backup option
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
Request for information	
IAEA	- May request reporting State to provide more information and/or link to emergency web site (USIE)
EC	- May request notifying State to provide more information and/or access to authority web site - Deals with the request using EC resources and support arrangements with external partners - May seek the advice of or request information from the IAEA or other international organization - May publish the request and the response on WebECURIE
Other	- May submit requests for information to the IAEA
IAEA	- Compiles received information from the reporting State - May publish summary on the IAEA's emergency web site (USIE)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the reporting States - Collates replies and informs requesting contact points - Publishes replies on the IAEA's emergency web site (USIE) if there is a sufficient number of requests for information - Publishes on the IAEA's emergency web site (USIE) an advisory message if there is a need to counter false

Emergency Class: ALERT	
Response actions	
	rumours
Other	- Informs IAEA about any additional information that may be an issue of interest or concern
Assessment and prognosis	
IAEA	- May compile and analyse information, assess potential radiological consequences and anticipate possible event progression
Request for advice or assistance	
IAEA	- Receives requests for advice and informs relevant international organizations that may be able to provide advice - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to requesting State
Other	- Informs the IAEA and other international organizations about request for advice received - Coordinates the provision of requested advice with relevant organizations, as appropriate, according to their respective roles
Public information	
IAEA	- May establish liaison with the official media focal point in the reporting State - May issue press release and post on the IAEA's public web site detailing event and actions taken and role of the IAEA
EC	- DG ENER may prepare a draft press release and may forward it to the notifying/'Accident State' for information/comment, with time limit for feedback - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC technical support arrangements if activated - May additionally provide draft press release to IAEA for comment, with time limit for feedback - Publishes any press release from Commission press office and may publish on WebECURIE

Emergency Class: OTHER EVENTS IN A FACILITY	
Description:	Any other event in a facility with an insignificant decrease in nuclear or radiation safety that may raise public concerns and/or media interest or that may provide lessons to be learned by the international community.
Obligation:	There is **no obligation** on States Parties by virtue of the Early Notification Convention to advise the IAEA or other States of conditions representing this class of events.
Expectation:	There is **no specific requirement** under the IAEA Safety Standards Series No. GSR Part 7 to report conditions representing this class of events.
Voluntary action:	A State may send an **advisory message** to the IAEA regarding this class of events in order: (1) to provide authoritative information on this class of events; and (2) to pre-empt legitimate requests from other States for assistance in obtaining information.
Recommendation:	The IAEA Secretariat **encourages** States to inform the IAEA of this class of events if the event has triggered public concerns and/or wide media interest.

Emergency Class: OTHER EVENTS IN A FACILITY	
Response actions	
Initial advisory message and exchange of information	
IAEA	- Authenticates initial advisory and verifies the content with the reporting State - May establish liaison with the reporting State - May publish advisory message on IAEA's emergency web site (USIE), including any attachments and/or links to the State's web site, unless otherwise instructed by the State concerned
EC	- Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system
Further information from the reporting State	
IAEA	- Authenticates the message and verifies the content with the reporting State - May compile and analyse information, assess potential radiological consequences and anticipate possible event progression; may advise States and international organizations - May publish further information on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's own web site, unless otherwise instructed by the reporting State
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
Request for information	
IAEA	- May request the State concerned to provide more information and/or link to emergency web site (USIE)
Other	- May submit requests for information to the IAEA
IAEA	- Compiles information received from the State concerned - May publish summary on the IAEA's emergency web site (USIE)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the State concerned - Collates replies and informs requesting States - Publishes replies on the IAEA's emergency web site (USIE) if there is a sufficient number of requests for information - Publishes on the IAEA's emergency web site (USIE) an advisory message if there is a need to counter false rumours
EC	- DG ENER may prepare a draft press release and may forward it to the notifying/'Accident State' for information/comment, with time limit for feedback - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC technical support arrangements if activated - May additionally provide draft press release to IAEA for comment, with time limit for feedback - Publishes any press release from Commission press office and may publish on WebECURIE
Other	- Informs IAEA about any additional information they may be aware of

Emergency Class: OTHER EVENTS IN A FACILITY	
Response actions	
Assessment and prognosis	
IAEA	- May evaluate protective actions (if any) and other response actions based on information provided - May broadly assesses likely emergency progression (if applicable) - May share results with States and relevant international organizations - May repeat the process when new information becomes available
Request for advice or assistance	
IAEA	- Receives requests for advice and informs relevant international organizations that may be able to provide advice - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to requesting State
Other	- Informs the IAEA and other international organizations about request for advice received - Coordinates the provision of requested advice with relevant organizations, as appropriate, according to their respective roles
Public information	
IAEA	- May establish liaison with the official media focal point in the reporting State - May issue press release and post it on the IAEA's public web site detailing event and actions taken and role of the IAEA - May share with the public overviews containing information related to on-site protective actions (if any)and other response actions and likely situation development (if applicable)
EC	- DG ENER may prepare a draft press release and may forward it to the notifying/'Accident State for information/comment, with time limit for feedback - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC technical support arrangements if activated - May additionally provide draft press release to IAEA for comment, with time limit for feedback - Publishes any press release from Commission press office and may publish on WebECURIE.

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Emergency Class: RADIOLOGICAL EMERGENCY	
Description:	Any event which is of actual, potential or perceived radiological significance warranting protective actions and other response action at any location and is not a nuclear emergency. This includes: missing (lost or stolen) or lack of control of a dangerous or potentially dangerous source, including re-entry of a space object with nuclear power source(s) or a dangerous source on board; elevated radiation levels of unknown origin or contaminated commodities; transport accident involving nuclear or radioactive material; dispersion of alpha emitters; serious overexposure or diagnosis of medical symptoms of overexposure; accidental medical overexposure; and any events resulting in or potentially resulting in great concern among the population owing to the actual or perceived radiological hazard.
Obligation:	If a release of radioactive material occurs or is likely to occur and results or may result in transboundary release, States Parties to the Early Notification Convention **are obliged to forthwith notify** potentially affected States and the IAEA, **provide relevant information** and **respond to requests for information** from affected States.
Expectation:	States not Parties to the Early Notification Convention, in order to meet the requirements of the IAEA Safety Standards Series No. GSR Part 7, are **expected to notify**, provide relevant information and respond to requests for information if the 'radiological emergency' represents a transnational emergency or is likely to become one (e.g. a dangerous source that has been transported across or is suspected of having been transported across a national border; detecting significant increases in atmospheric radiation levels of unknown origin; or detecting significant increases in contamination in imported commodities).
Voluntary action:	In all other cases, a State may send an **advisory message** to the IAEA informing about a 'radiological emergency'.
Recommendation:	The IAEA Secretariat **encourages** States to inform the IAEA of this emergency class in particular in case of high media interest and/or public concerns. States should comply with response time objectives set out in the IAEA Safety Guide No. GS-G-2.1

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
Initial notification/advisory message and exchange of information	
IAEA	- Authenticates initial notification or advisory message and verifies the content with the notifying/reporting State - Offers good offices to the notifying/reporting State - May establish basic response mode - May establish liaison with the notifying/reporting State - Respecting any confidentiality constraints or instructions from the reporting State, may publish advisory message on the IAEA's emergency web site (USIE), including any attachments and/or links to the reporting State's web site, unless otherwise instructed by the notifying/reporting State
EC	Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates the incoming initial notification - Publishes the unedited information on WebECURIE and, in the case of ALERT level, ensures that Member States and the IAEA are aware of it by means of a dedicated callout and response system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put their environmental monitoring systems into emergency mode - May activate RESPEC technical support arrangements
FAO	- May assign liaison officers (AGE) to the IAEA - May put Nuclear Emergency Crisis Network of Technical Experts (ECN) on standby - May initiate initial assessment of the impact on food production and distribution systems, including potential measures to restrict food consumption
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff
UNDP	- Authenticates initial notification (in case it does not come from the IAEA) - May activate technical support in the area of its mandate
In case of suspected or actual transnational emergency (in case of 'notification')	
IAEA	- Forthwith informs by fax affected or possibly affected States - Publishes notification on the IAEA's emergency web site (USIE), including any attachments and/or links to the notifying State's web site - Sends email to potentially affected States and relevant international organizations, requesting them to access

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
	the IAEA's emergency web site (USIE) and confirm receipt of notification - Initiates coordinated interagency response, if appropriate - Calls relevant States and relevant international organizations that have not confirmed receipt of notification on the IAEA's emergency web site (USIE)
EC	Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates the incoming initial notification - Publishes the unedited information on WebECURIE and, in the case of ALERT level, ensures that Member States and the IAEA are aware of it by means of a dedicated callout and response system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May activate RESPEC technical support arrangements
FAO	- May advise the Member States on organization of food inspection and monitoring in food, agriculture, forestry and fisheries
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff
WHO	- Alerts IHR National Focal Points, WHO Regional and Country Offices and IHR Lyon office - Gathers additional information to initially assesses potential public health implications - Considers and plans for additional steps as appropriate, including fulfilment of the notification requirements under IHR (2005) provisions, dissemination of information to States Parties, and putting the relevant expert networks on standby - Ensures timely receipt of information required for public health risk assessment
Event Type: Elevated radiation levels Confirmed unusually higher ambient dose rates or activity concentrations in air, food or commodities believed to come from an unknown origin in another State, raising suspicion of an event of actual, potential or perceived radiological significance	
IAEA	- Contacts relevant States to confirm the origin - May request specialized services from WMO - May establish liaison with FAO and/or WMO
WMO Lead RSMCs	- Provide specialized products based on IAEA requested parameters - Distribute products to the IAEA, WMO and NMHSs in the relevant region
CTBTO	- Provides global monitoring results (radionuclide air concentrations) and related expertise
EC	Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates the incoming initial notification - Publishes the unedited information on WebECURIE and, in the case of ALERT level, ensures that Member States and the IAEA are aware of it by means of a dedicated callout and response system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May activate RESPEC technical support arrangements
FAO	- May submit requests for information to the IAEA - May request the notifying State to provide information on food production and distribution and consumption restrictions in areas affected by the event - May compile information on food contamination and publish information on IAEA;s emergency web site (USIE) along with recommendations on management options - May participate in the response mode and provide technical support to the affected State, with emphasis on agricultural countermeasures and protection of the food supply
WHO	- Promptly informs Regional and Country Office and shares information with the IHR National Focal Point in the affected State - Requests IAEA to verify informationEnsures timely receipt of information required for assessment of potential public health riskContinues monitoring the situation and public health surveillance
Event Type: Missing dangerous source A lost or stolen dangerous source, i.e. one that, if not brought under control, could give rise to exposure sufficient to cause severe deterministic effects	
IAEA	- Based on available information, confirms that the source can be (cannot be) categorized as ' dangerous' *If a dangerous source is found or detected (including a source or several sources being used for criminal purposes), information about the exact location is withheld until the source(s) has (have) been made safe and secure*
EC	Where the notification criteria correspond to those for sending ECURIE Advisory: - Authenticates incoming initial notification from the notifying State

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
	- Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system
FAO	- May submit requests for information to the IAEA - May compile information on food contamination and publish information on IAEA's emergency web site (USIE) along with recommendations on management options - May participate in the response mode and provide technical support to the affected State, with emphasis on agricultural countermeasures and protection of the food supply
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff
WHO	- Informs Regional and Country offices, shares information with the IHR National Focal Point in the affected State - Requests IAEA to verify information and gathers additional information to initially assesses potential public health implications - Considers additional steps, including putting the relevant expert networks on standby - Ensures timely receipt of information required for assessment of potential public health risk assessment - Continues monitoring the situation and public health surveillance - In case of assistance request on medical management of the injured person(s), engages WHO expert networks, as necessary; coordinates with the national health authorities of the affected State
Event Type: Space object re-entry A satellite or other space object with nuclear power source(s) or dangerous radioactive sources on board has given rise to a risk of re-entry of radioactive material to the Earth in the near future, or such re-entry is occurring or has occurred	
IAEA	- Establishes liaison with OOSA and other international organizations as appropriate - Forthwith informs by fax States that may be physically affected and relevant international organizations - Offers the IAEA's good offices to potentially affected States
EC	Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates the incoming initial notification - Publishes the unedited information on WebECURIE and, in the case of ALERT level, ensures that Member States and the IAEA are aware of it by means of a dedicated callout and response system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May activate RESPEC technical support arrangements
OOSA	- Establishes liaison with the launching State and IAEA to ensure effective transmission of valid information, including pre-launch safety assessment (if available) - If required, liaise with States that have resources to track space objects and determine re-entry timeframe and probable impact coordinates for objects surviving components for transmission to the IAEA - Ensures that most accurate trajectory and impact predictions (TIP) are provided to the IAEA for emergency response - Ensures that any information relating to the incident received under other international instruments on space objects and their recovery is provided to the IAEA - Ensures that any other States reporting a recovered space object within their territory during the incident timeframe take full radiological precautions until its threat has been assessed - Ensures that the IAEA is aware of any other reports of recovered space objects to ensure containment of contamination - Informs the Secretary-General of the United Nation (SG) of the re-entry and provides the required briefing package (including TIPs, assessment of survivability of radiological components and response scenarios)
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff
WHO	- Promptly informs Regional and Country Office and shares information with the IHR National Focal Point in the affected State - Requests IAEA to verify information - Ensures timely receipt of information from the IAEA and CTBTO as required for assessment of potential public health risk - Continues monitoring of the situation and public health surveillance
Event Type: Release from a facility Events resulting in a release of radioactive material to the environment	

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
IAEA	- Informs WMO (RTH Offenbach, all RSMCs, WMO Secretariat) - Requests specialized atmospheric transport and dispersion prediction products from the WMO Lead RSMCs
EC	Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates the incoming initial notification - Publishes the unedited information on WebECURIE and, in the case of ALERT level, ensures that Member States and the IAEA are aware of it by means of a dedicated callout and response system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May activate RESPEC technical support arrangements
WMO Lead RSMC	- Generates basic products based on IAEA request parameters, or with default scenario parameters if none are provided - Distributes products to the IAEA, WMO and NMHSs in the relevant region
CTBTO	- Provides global monitoring results (radionuclide air concentrations) and related expertise
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff
WHO	- Promptly informs Regional and Country Office and shares information with the IHR National Focal Point in the affected State - Requests IAEA to verify information - Ensures timely receipt of information from the IAEA and CTBTO as required for assessment of potential public health risk - Continues monitoring the situation and public health surveillance
If the emergency involves contamination of water, surface, people or commodities that may warrant urgent protective actions, or for which precautionary protective actions have been taken:	
IAEA	- Informs and establishes liaison with WHO - Informs and establishes liaison with PAHO (if in the Americas) - Informs and establishes liaison with FAO
FAO	- May submit requests for information to the IAEA - May request the notifying State to provide information on food production and distribution and consumption restrictions in areas affected by the event - May compile information on food contamination and publish information on IAEA's emergency web site (USIE) along with recommendations on management options - May convene meetings of ECN and prepare to support AGE as necessary - May establish liaison with the reporting State through FAO Representative - May initiate initial assessment of impact on food production and distribution systems, including potential measures to restrict food consumption - May participate in the response mode and provide technical support to the affected State, with emphasis on agricultural countermeasures and protection of the food supply
OOSA	- Ensures that any other States reporting a recovered space object within their territory during the incident timeframe take full radiological precautions until its threat has been assessed - Ensures that the IAEA is aware of any other reports of recovered space objects to ensure containment of contamination
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff as well as with relevant intergovernmental and international organizations
UNDP	- May provide support to affected State(s) - May place on standby specific resources
WHO	- Promptly informs Regional and Country Office and shares information with the IHR National Focal Point in the affected State - Requests IAEA to verify information - Ensures timely receipt of information from relevant international organizations as required for assessment of potential public health risk - Coordinates with the national health authority, engages WHO expert networks - Continues public health surveillance and offers advice and/or technical assistance to the affected State
Event Type: Severe overexposure An overexposure due to a radiation source, intake of, or contamination with, radioactive materials which can cause severe	

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
deterministic effects	
IAEA	- Establishes liaison with WHO (and PAHO if in the Americas) and coordinates a joint response as appropriate - Takes steps to protect patient confidentiality
EC	Where the criteria correspond to those for sending ECURIE Advisory: - Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsLiaises with relevant organizational levels and staff as well as with relevant international organizations
WHO	- Contacts ROs, COs and the national health authority; requests additional information and continues monitoring the situation - Engages WHO expert networks and offers advice to the affected State - May deploy a technical expert to join an IAEA field mission
Further information from the notifying/reporting State	
IAEA	- Authenticates the message and verifies the content with the notifying/reporting State - Publishes further information on the IAEA's emergency web site (USIE), including any attachments and/or links to the notifying/reporting State's web site, respecting confidentiality constraints or instruction from the reporting State - Uses fax for distribution of further information only if convenient or as a backup option
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
Request for information	
IAEA	- May request notifying/reporting State and/or relevant international organizations to provide more information and/or link to appropriate emergency web site (USIE)
EC	- May request notifying State to provide more information and/or access to authority website - Deals with the request using EC resources and support arrangements with external partners - May seek the advice of or request information from the IAEA or other international organization - May publish the request and the response on WebECURIE and may forward to the IAEA for publishing on IAEA's emergency web site (USIE)
OOSA	- Requests the IAEA provide information for provision to the SG
PAHO	- Coordinates with the organizational levels concerned, with relevant WHO major offices, and activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
WHO	- Requests national health authorities to provide additional information pertaining to the clinical management and prognosis and shares the information with the IAEA, as required
Other	- May submit requests for information to the IAEA
IAEA	- Compiles information received from the reporting State - Publishes summary on the IAEA's emergency web site (USIE), respecting any confidentiality constraints or instructions from the reporting State - Sends summary by fax to all States and relevant international organizations (backup option)
IAEA	- Authenticates and verifies requests for information - Compiles requests for information and forwards them to the notifying/reporting States - Collates replies and informs requesting contact points - Publishes replies on the IAEA's emergency web site if there is a sufficient number of requests for information - Publishes on the IAEA's emergency web site an advisory message if there is a need to counter false rumours
FAO	- Provides support in agriculture countermeasures and safety of food supplies
WHO	- Continues monitoring the situation and gathering information - Engages WHO expert networks in consultation process and offers technical advice to the affected State - May deploy a technical expert to join IAEA field mission
Other	- Informs IAEA about any additional information they may be aware of
Assessment and prognosis	
IAEA	- Based on information provided, evaluates recommended/planned/implemented protective actions and other

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
	response actions to assess whether they are in broad compliance with relevant IAEA safety standards - Broadly assesses likely emergency progression (if applicable) - Shares results with States and relevant international organizations - Repeats the process when new information becomes available
Request for advice or assistance	
IAEA	- Receives requests for advice or assistance under the Assistance Convention, informs relevant international organizations that may be able to provide assistance and coordinates the resources to be allocated - Evaluates the situation and, in coordination with the relevant international organizations, provides technical advice to requesting State - May deploy a fact finding team in agreement with the requesting State - May develop a comprehensive assistance action plan, in coordination with the requesting State, assisting States and international organizations, as appropriate - Coordinates implementation of the assistance action plan - May place on standby additional resources *The provision of international assistance follows the IAEA Response and Assistance Network (RANET) process*
EC	- Maintains its system for dealing with humanitarian aid requests active on a 24/7 basis - Forwards requests received to EU Member States via its dedicated platform - Coordinates the responses from Member States received - May send a team to the requesting State to coordinate on a local level the distribution of aid
OOSA	- Provides advice and/or assistance to the IAEA, as required
PAHO	- Coordinates with the organizational levels concerned, with relevant WHO major offices, and activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
UNDP	- Informs the IAEA and potential donor countries on request for assistance received - Coordinates the provision of requested assistance on early recovery with relevant international organizations and/or donor countries - May deploy a field team in agreement with the requesting State
WHO	- Receives requests for advice or technical assistance under the Assistance Convention via the IAEA and under IHR directly from the State - Provides input to the IAEA mission planning and implementation; engages WHO expert networks in consultation process - May deploy a WHO technical expert to join IAEA field mission
Other	- Informs the IAEA and other international organizations about received request for assistance - Coordinates the provision of requested assistance with relevant organizations, as appropriate, according to their respective roles[43]
Public information	
IAEA	- Publishes reporting State press releases or URL of public web site on the IAEA's emergency web site (USIE) - May establish liaison with the official media focal point in the notifying/reporting State and relevant international organizations as appropriate to coordinate release of information to the media - Issues press releases and posts them on the IAEA's public web site, detailing the emergency and actions taken and explaining the role of the IAEA in coordination with the notifying/reporting State - May share overviews containing information related to protective actions and likely situation development with the public *At no point would an assessment of the situation or prognosis of likely emergency progression be shared with the public without knowledge of the 'Accident State'*
EC	- May prepare a Commission press release - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC arrangements - May make available press release to ECURIE Member States via ECURIE channels
OOSA	- Informs the Executive Office of the Secretary-General and the Spokesperson, to ensure prepared response to queries from media - Issues press releases etc. if required

[43] Those organizations with regional structures will ensure that other relevant organizations are consulted regarding any assistance to be provided through their regional offices, including the UNDP.

Emergency Class: RADIOLOGICAL EMERGENCY	
Response actions	
WHO	- May prepare an independent press release (limited to the area of WHO's mandate), media statements, FAQs, fact sheets, etc. and share the press release content with the IAEA and other IACRNE members
All	- Whenever possible, issue coordinated press releases/media advisories, or limit those to the areas of their respective mandates - Submit copies of any press releases to the IAEA or send/submit URL of public web site
In case of complex emergency or disaster	
IAEA	- May establish liaison with OCHA *If the event is a complex emergency or disaster with a radiological component*
EADRCC	- Coordinates humanitarian assistance provided by allied and partner countries, liaises closely with relevant international actors
OCHA	- Coordinates international humanitarian assistance, leads advocacy efforts and consolidates humanitarian information through reporting
PAHO	- Coordinates with the organizational levels concerned, with relevant WHO major offices and activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
UNDP	- Supports the application of early recovery approaches and the recovery process in cooperation with the relevant national, regional and local authorities
WHO	- Coordinates Global Health Cluster[44] of the Inter-Agency Standing Committee (IASC) providing arrangements for humanitarian response to disastersEnsures timely receipt of information for public health risk assessmentContinues public health surveillanceOffers technical assistance to the affected StateDisseminates information as appropriate to States Parties, through secure WHO web sites EIS and EMS

[44] http://www.who.int/hac/global_health_cluster/guide/en/index.html

ADDITIONAL RESPONSE ACTIONS if emergency is triggered by a nuclear security event	
Description:	A nuclear security event includes criminal or intentional unauthorized acts; it also includes unauthorized acts that involve or are directed at nuclear material, other radioactive material, associated facilities and associated activities. Examples of such events include sabotage, as well as using, or threatening to use a radiological dispersal device or radiological exposure device.

Additional response actions	
Initial notification/advisory message and exchange of information	
IAEA	- May establish liaison with EUROPOL, INTERPOL, WCO and/or other relevant international organizations as appropriate, respecting instructions from the notifying/reporting State - May inform relevant States and relevant international organizations as appropriate, respecting any confidentiality constraints and instructions from the notifying/reporting State
EADRCC	- Promptly forwards initial notification received from the IAEA to civil protection organizations in allied and partner countries by email - Appoints a duty officer to handle related communications on a 24/7 basis
EC	- May establish liaison with EUROPOL, FRONTEX and/or other relevant international organizations as appropriate Where the notification criteria correspond to those for sending ECURIE Alert or Advisory: - Authenticates incoming initial notification from the notifying State - Publishes the unedited information on WebECURIE and ensures that Member States and the IAEA are aware of its existence by means of a dedicated callout system - May activate the Emergency Team to prepare to handle related communications on a 24/7 basis - May request EURDEP Member States to put the environmental monitoring systems in Emergency mode - May activate RESPEC technical support arrangements
EUROPOL	- May be put on standby - May establish liaison with the concerned Member State(s) (for incidents in the EU) - May establish liaison with the EC (for incidents in the EU) - May establish liaison with the IAEA - May establish liaison with INTERPOL
INTERPOL	- May be put on standby - May disseminate information about the act via its notice system (orange for materials and devices, red for individuals) - May establish liaison with EUROPOL - May establish liaison with the IAEA - Coordinates any preliminary international investigations
PAHO	- Interacts with national health authorities concerned, including through IHR communication channelsAlerts relevant organizational levels and staff
WHO	- Contacts ROs, COs and the national health authority and requests additional information; continues monitoring the situation - Depending on the scale of the event, ensures timely receipt of information required for potential public health risk assessment
Further information	
IAEA	- Authenticates the message and verifies the content with the reporting State - May further inform relevant States and relevant international organizations as appropriate, respecting any confidentiality constraints or instructions from the reporting State
EUROPOL	- May activate the EUROPOL First Response Network
INTERPOL	- May disseminate information about the act via its notice system (orange for materials and devices, red for individuals) - Coordinates any preliminary international investigations
EC	- Ensures the availability of WebECURIE, where the notifying or other ECURIE State can place all further information on the national and event status board
PAHO	- Continues as above
WHO	- May activate emergency response proceduresContinues public health surveillance, risk assessment and public communicationDisseminates information as appropriate to States Parties, through secure WHO web sites EIS and EMS
Other	- Informs IAEA about any additional information they may be aware of

Additional response actions	
Request for information	
IAEA	- May request notifying/reporting State to provide more information - Authenticates and verifies requests for information - Compiles requests for information and forwards them to the reporting States
Other	- May submit requests for information to the IAEA
IAEA	- Compiles information received from the reporting State - Informs requesting international organizations, respecting any confidentiality constraints and instructions from the reporting State
Assessment and prognosis	
IAEA	- None
EUROPOL	- Not yet defined
INTERPOL	- Not yet defined
Request for advice or assistance	
IAEA	- Receives requests for advice or assistance and may initiate RANET process - Informs relevant international organizations - Evaluates the situation and, in consultation with others, provides advice to requesting State
EADRCC	- May advise allied and partner countries to verify information provided in the *CBRN Inventory* and to raise readiness levels of assets and capabilities for radiological emergency response
EC	- Maintains its system for dealing with humanitarian aid requests active on a 24/7 basis - Forwards requests received to EU Member States via its dedicated platform - Coordinates the responses from Member States
PAHO	- Coordinates with the organizational levels concerned, with relevant WHO major offices, and activates relevant regional networks of experts to cater to the needs of the requesting State or partner intergovernmental or international organization
WHO	- Engages WHO expert networks for consultation and offers advice/assistance to the affected State - Where relevant to WHO mandate, provides input to the IAEA emergency response mission planning and implementation
Public information	
IAEA	- May publish notifying/reporting State press releases or URL of public web site on IAEA's emergency web site (USIE) - May establish liaison with the official media focal point in notifying/reporting State - In coordination with the notifying/reporting State may issue press release(s) and posts on the IAEA's public web site detailing the threat and the role and actions taken by the IAEA
EC	- May prepare a Commission press release - May have draft press releases checked for accuracy/suitability by an independent party under RESPEC arrangements - May consult EUROPOL regarding press release - May make available press release to ECURIE Member States via ECURIE channels
WHO	- If necessary, may prepare an independent press release (limited to the area of WHO's mandate), media statements, FAQs, fact sheets, etc. and share issued press release content with the IAEA and other IACRNE members

Section 4

4. EMERGENCY PREPAREDNESS

4.1. General responsibilities

Commensurate with their respective functions, roles and responsibilities, each participating organization establishes and maintains an adequate emergency preparedness and response programme.

The Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) is the coordination mechanism among the participating organizations (see Fig. 4) for facilitating development and maintenance of coordinated and consistent preparedness and response arrangements. However, the committee's activities do not affect the cooperation arrangements defined in the relationship agreements among the organizations and their day-to-day implementation.

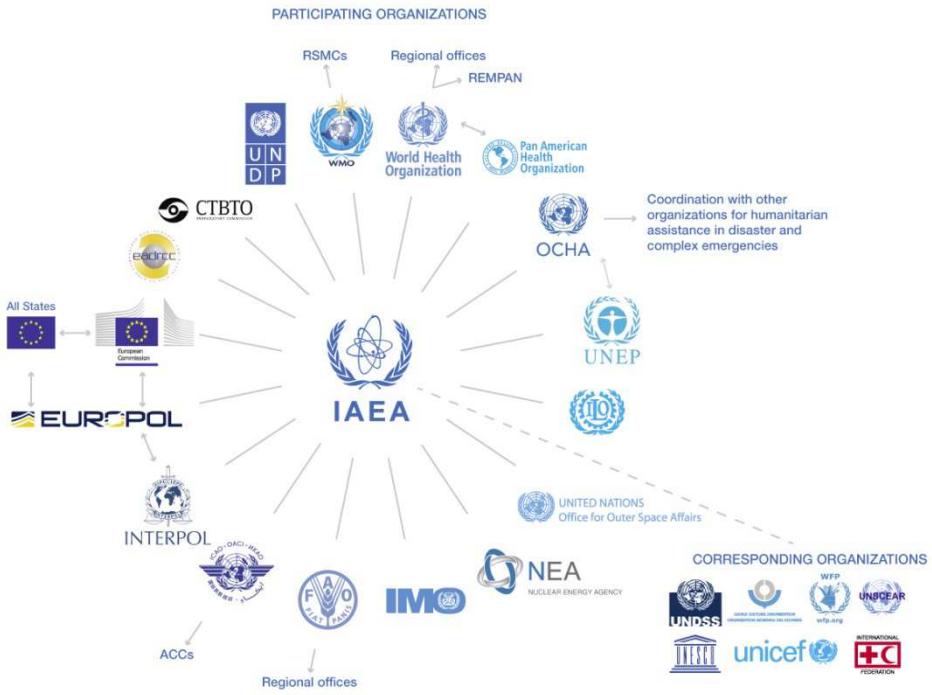

FIG. 4. IACRNE participating and corresponding organizations.

Per the IACRNE's Terms of Reference (see Appendix G), any international organization that has a role with respect to preparedness for or response to nuclear or radiological emergencies is eligible for membership in the committee. To address major preparedness tasks, the committee may establish, based on an identified need, standing working groups and/or ad hoc task groups.[45]

The committee corresponds as necessary with other international organizations, may invite these organizations on an ad hoc basis to send representatives to attend IACRNE's meetings as observers or may co-opt representatives to the committee for specific purposes.

4

4.2. Basis for preparedness

In keeping with the guiding principles stipulated in Section 2.6, the basis for preparedness at the level of participating organizations derives from their statutory functions, while specific obligations with respect to the emergency exchange of information and international assistance derive from the Early Notification Convention and the Assistance Convention and other applicable instruments, depending upon the particular organization and its function. Relevant safety standards on emergency preparedness and response[46] support these responsibilities. Specific functions and capabilities of each participating organization are described in Appendix B. Roles and capabilities of corresponding organizations that are cooperating in the framework of this Joint Plan are outlined in Appendix C.

It is the responsibility of the participating organizations to ensure that appropriate arrangements are made within their organizations to carry out their functions in line with this Joint Plan.

4.3. Interagency arrangements and procedures

Interagency arrangements among the IACRNE participating organizations are documented separately from this Joint Plan and may take the form of, inter alia:

(1) Interagency cooperative agreements;

(2) Interagency arrangements.

Interagency agreements and arrangements may be updated from time to time.

The interagency response arrangements and communication channels, including those for providing media information, which are documented separately from this Joint Plan, are formalized by a simple exchange of letters between the parties and may be updated from time to time. They are based on this Joint Plan, or harmonized with it, and maintained by the participating organizations. These arrangements describe the standard response actions to be taken by each participating organization during an emergency.

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[45] By way of example, as a result of the lessons learned and experiences gained during the response to the accident (general emergency) at the Fukushima Daiichi nuclear power plant in 2011, the Committee established a IACRNE Working Group on Air and Maritime Transportation, with the principal responsibility to facilitate a coordinated and consistent response among the international organizations and trade associations concerned in the event of a nuclear or radiological emergency that has or is perceived to have an impact on the international air and/or maritime navigation.

[46] In particular, IAEA Safety Standards Series No. GSR Part 7.

Under the Joint Plan, the IACRNE standard operating procedures may be adopted at the IACRNE meetings. A list of interagency agreements is included in Appendix A, while IACRNE standard operating procedures are outlined in Appendix F.

4.4. Financing

Each participating organization makes arrangements to cover its own expenses for all the activities related to the preparedness and response activities of this Joint Plan.

4.5. Feedback from responses

Following the response to an emergency, the committee compiles lessons identified (a critique of deficiencies in the Joint Plan and the interagency arrangements) and initiates appropriate follow-up corrective actions.

4.6. Training and exercises

The participating organizations assist each other and their Member States with training activities designed to improve preparedness for response. Each participating organization is encouraged to coordinate its training programmes through the IACRNE to avoid duplication and make its training available to other organizations.

The committee prepares and conducts its own table-top exercises from time to time, which are aimed at reviewing coordination mechanisms defined in this Joint Plan.

Each participating organization, in conjunction with its Member States, also periodically exercises its arrangements. Each organization is encouraged to coordinate its international exercises with the IACRNE and to invite other participating organizations to take part, in order to avoid duplication and to make the most efficient use of resources. To improve coordination, the IACRNE prepares, as far as feasible, and disseminates a multi-year calendar of planned international exercises.

4.6.1. International exercises

For any international exercise proposal submitted to the committee by its members, the following general working method applies:

(1) The organization presenting the exercise to the IACRNE for coordination is the exercise lead organization;

(2) If other organizations are interested in participating, they should each have their own exercise working groups to address their own specific exercise objectives and arrangements;

(3) The IACRNE has a standing working group[47] to facilitate the overall coordination between the participating organizations and with the exercise host State (if any), agree on common objectives, work towards an agreed scenario and develop common exercise documents (although there may still be exercise documents that are specific to an organization);

[47] The IACRNE Working Group on Coordinated International Exercises.

(4) If there are any issues concerning, for example, the objectives or approaches of an exercise, the final decision rests with the exercise lead organization (in agreement with the exercise host State, if any);

(5) With regard to inviting the participation of interested States, a common, coordinated invitation should be sent out by each participating organization to its Member States/points of contact;

(6) Each participating organization conducts its own evaluation and prepares its own report;

(7) The IACRNE Working Group on Coordinated International Exercises prepares an overall exercise evaluation report.

4.6.2. ConvEx exercises

The IAEA prepares and conducts communication drills and exercises entitled ConvEx (Conventions Exercises) at three levels. These exercises take place according to a predetermined schedule and are described in the IEComm manual. All participating organizations may take part in any of these exercises.

ConvEx-3

The ConvEx-3 exercise is a large scale exercise mostly covering the response in an early phase of a severe nuclear or radiological emergency. It is conducted every few years, using an appropriate exercise scenario, to test the response of States and international organizations in a severe nuclear or radiological emergency (irrespective of its cause), including information exchange, provision of assistance, assessment and prognosis and coordination of public information.

The IAEA invites States at least 18 months in advance to host a ConvEx-3 exercise and expects to receive offers in the following six months. The IAEA liaises with the States offering to host the exercise and with the IACRNE in order to decide which State will host the exercise. The host State must meet the following conditions:

(1) The host State must be an IAEA Member State and apply the current IEComm arrangements.

(2) The host State must simulate an emergency that involves a significant release of radioactive material into the environment requiring off-site protective actions and other response actions and having a transnational impact.

(3) The *national warning point*, relevant competent authorities in the host State and the 'accident facility' (if applicable) must participate in the exercise.

(4) The exercise must last at least 24 hours from the first message sent to the IAEA.

(5) The host State must guarantee its intention to establish and maintain communication links and information exchange with the IAEA throughout the exercise.

(6) The host State must designate at least one person to work over a twelve-month period with the IACRNE Working Group on Coordinated International Exercises to prepare the international part of the exercise, especially the international exercise documents.

The selection of the host State takes also into account the available resources and the expressed objectives of the international organizations intending to participate. When choosing the host State, priority is given to States in regions that have not yet hosted a ConvEx-3 exercise. Detailed preparation begins no later than twelve months before the scheduled date of the exercise. The preparation, conduct and evaluation of the international part of the exercise are coordinated through the IACRNE Working Group on Coordinated International Exercises and may involve also representatives of neighbouring States aiming to participate.

The IACRNE Working Group on Coordinated International Exercises prepares the *Exercise Manual*[48] and distributes it to designated exercise controllers. Evaluation of the international part of the exercise aims at identifying deficiencies in this Joint Plan and interagency arrangements.

Relevant IACRNE organizations and neighbouring countries of the 'Accident State' are expected to participate in these exercises, while all other States and international organizations are encouraged to participate.

ConvEx-2f

The objective of this exercise is to test the IACRNE standard operating procedures (SOPs) in general, and the SOP-104, *Public communication of IACRNE organizations during a nuclear or radiological emergency* in particular.

The IAEA coordinates the preparation, conduct and evaluation of the exercise. The exercise is conducted once every two years on a specific date and lasts no more than eight hours (elapsed time). This exercise is not conducted in the same year as the ConvEx-3 exercise.

In the exercise registration process, the IAEA invites all participating organizations to take part in the exercise.

4.6.3. INEX exercises

The OECD NEA develops, organizes, evaluates and analyses the International Nuclear Emergency Exercise (INEX) series to address best practices and identify areas for improvement in nuclear/radiological emergency management. The INEX series have proved successful in testing, investigating and facilitating improvements in emergency management systems nationally and internationally. These exercises focus largely on national and international aspects of the early phase management of emergencies at nuclear power plants and on issues in consequence management and transition to recovery in response to malicious acts involving the release of radioactive materials in an urban setting. Since the accident at the Fukushima Daiichi nuclear power plant in March 2011, it has been recognized that notification, communication and identifying and obtaining resources during catastrophic events can be difficult, and that the need for established protocols, policies and procedures among and between country entities is critical for minimizing negative impacts.

The OECD NEA invites IACRNE members to participate in the INEX exercise series.

The IACRNE may activate the IACRNE Working Group on Coordinated International Exercises in order to evaluate the international part of the exercise, aiming at identifying

[48] Comprising a Guide for Controllers, a Guide for Evaluators, a Guide for Players and an Evaluators' Report template.

good practices and areas for improvement in this Joint Plan and in the interagency arrangements.

4.7. Reviews of the Joint Plan and standard operating procedures

This Joint Plan and SOPs are reviewed regularly, but in no case less often than biennially, and updated as may be necessary, based on the review outcomes.

In conducting the Joint Plan review, the IACRNE seeks input from all participating organizations. The IACRNE may identify emergency management areas that could be improved and suggest corrective actions.

The committee prioritizes actions to be taken on the basis of the lessons identified. Programmes for addressing the lessons and for developing possible solutions are coordinated to the extent possible by the committee.

It is the responsibility of the IACRNE Secretary, in collaboration with the participating organizations, to coordinate the maintenance and updating of this Joint Plan, and to ensure that all participating organizations are notified of any revisions to this Joint Plan.

The objective of the change process is to ensure an orderly introduction of changes to the system so that:

(1) Participating organizations are clear what arrangements are in effect at any given time;

(2) Participating organizations have adequate advance time and information available to them to make any necessary changes to their response arrangements and to train affected personnel before the new release comes into effect.

The change process, illustrated in Fig. 5, is coordinated and implemented by the IACRNE Secretary.

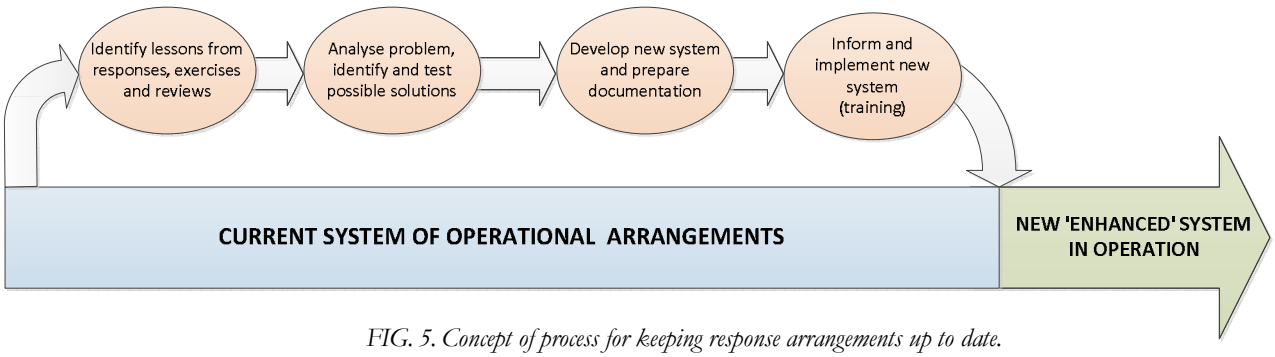

FIG. 5. Concept of process for keeping response arrangements up to date.

4.8. Cooperation in developing national capabilities

Several participating organizations have legal and other statutory obligations to provide technical cooperation in the development of national and regional emergency preparedness and response arrangements. Such technical cooperation may take the form of equipment provision, expert missions, reviews and services, training events, fellowships and diplomatic initiatives. In order to optimize the resources available for such initiatives, the participating organizations, to the extent reasonable and achievable, take steps to share plans in advance, consult with each other as appropriate and harmonize cooperation programmes.

In addition, participating organizations encourage their counterparts at the national level to strengthen their cooperation as appropriate and to ensure that arrangements are coordinated nationally in a manner that they are compatible with the interagency arrangements described in this Joint Plan.

4.9. Joint Plan distribution

This Joint Plan is electronically available on the USIE, IACRNE and IAEA web sites:

The USIE web site: https://iec.iaea.org/usie/actual/LandingPage.aspx

The IACRNE web site: https://nucleus.iaea.org/sites/iec/iacrne

The IAEA public web site: http://www-pub.iaea.org/books/IAEABooks/Series/124/Emergency-Preparedness-and-Response

The IAEA distributes five printed copies of this Joint Plan to the Secretariats of all participating organizations: CTBTO, EADRCC, EC, EUROPOL, FAO, ICAO, ILO, IMO, INTERPOL, OCHA, OECD NEA, OOSA, PAHO, UNDP, UNEP and WMO and to those corresponding organizations that contribute to the Joint Plan (IFRC and UNSCEAR). Each organization informs its counterparts and may link from its own web site to the electronic version of the Joint Plan on the IAEA's public web site.

The IAEA distributes additional printed copies to the requesting secretariats of the participating organizations.

4

Appendix A
Legal instruments, resolutions and other relevant sources

Statutes of participating organizations

(1) Constitution of the World Health Organization.

(2) Constitution of the Food and Agriculture Organization of the United Nations.

(3) Convention on International Civil Aviation.

(4) Statute of the International Atomic Energy Agency.

(5) Charter of the United Nations.

(6) Convention of the World Meteorological Organization.

(7) Constitution of the Pan American Health Organization.

(8) The Constitution and General Regulations of the ICPO-INTERPOL and amendments.

(9) Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, 1 December 2009.

(10) Treaty establishing the European Atomic Energy Community (EU Member States 1957).

(11) Council Decision establishing the European Police Office (EUROPOL) of 6 April 2009.

(12) Statute of the OECD Nuclear Energy Agency (amended 1995).

(13) Comprehensive Nuclear-Test-Ban Treaty (not yet entered into force).

Relevant conventions, treaties and international legal instruments

(14) Convention on Early Notification of a Nuclear Accident (1986).

(15) Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986)[49].

(16) Convention on the Physical Protection of a Nuclear Material as amended on 18 May 2016, IFRC/274/Rev 1 (1980).

(17) UN International Convention on the Suppression of Acts of Nuclear Terrorism, A/59/766 (2005).

(18) International Health Regulations (2005, entered into force on 15 June 2007).

(19) Treaty on Principles covering the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (1967).

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(20) Convention on Registration of Objects launched into Outer Space (1975).

(21) Convention on International Civil Aviation: Annex 3 — Meteorological Service for International Air Navigation, Part I, paragraphs 3.2.1e), 3.4.2g) and Part II, Appendix 1, Model SN and Appendix 9, paragraphs 1.3e) and 3.1b)3).

(22) Convention on International Civil Aviation Annex 4 — Aeronautical Charts, Appendix 2, Item 72.

(23) Convention on International Civil Aviation Annex 11 — Air Traffic Services, paragraphs 4.2.1.c), 6.2.2.2.1f) and 7.6.

(24) Convention on International Civil Aviation Annex 15 — Aeronautical Information Services, paragraph 5.1.1.1v), Appendix 1, ENR 5.3.2.

(25) International Convention for the Safety of Life at Sea (SOLAS), 1974.

(26) International Convention for the Prevention of Pollution from Ships (MARPOL) 1973 as modified by the Protocol of 1978.

(27) Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances.

United Nations General Assembly Resolutions

(28) General Assembly Resolution No. 46/182 — Strengthening of the coordination of humanitarian emergency assistance of the United Nations (1991).

(29) General Assembly Resolution 47/68 — Principles Relevant to the Use of Nuclear Power Sources in Outer Space, adopted on 14 December 1992.

(30) General Assembly Resolution No. 2997 — Institutional and financial arrangements for international environmental cooperation, 1972.

(31) General Assembly Resolution No. 913(X) — Effects of atomic radiation, adopted 3 December 1955.

[49] INFCIRC 336: Party to the Convention on Assistance in the Case of a Nuclear Accident, entered into force 26 February 1987 (WMO, FAO, WHO).

(32) General Assembly Resolution No. 3154 (XXVIII) — Effects of atomic radiation, adopted 14 December 1973.

(33) General Assembly Resolution No. 67/112 — Effects of atomic radiation, adopted 18 December 2012.

Interagency agreements

(34) Memorandum of Understanding between the Director General of the International Atomic Energy Agency and the United Nations Disaster Relief Co-ordinator, 1977.

(35) Relationship Agreement: Agreement between the International Atomic Energy Agency and the World Health Organization, entered into force 28 May 1959. INFCIRC 20, Part III.

(36) Agreement between the International Atomic Energy Agency and the World Meteorological Organization, entered into force 12 August 1959.

(37) Administrative Agreement on Co-operation between the European Commission and the European Police Office (EUROPOL), February 2003.

(38) Operational Agreement on Co-operation between the European Police Office (EUROPOLEUROPOL) and the International Criminal Police Organization (INTERPOL), November 2001.

(39) Memorandum of Understanding related to Assessment, Prevention, Control and Establishment of Marine Pollution and Related Research and Monitoring between the International Atomic Energy Agency, the United Nations Environment Programme and the Intergovernmental Oceanographic Commission of UNESCO, 1992 .

(40) Notification and Information Exchange in a Nuclear or Radiological Emergency — Co-operative Arrangements between EC (DG TREN H.4) and IAEA (IEC), 2005.

(41) Agreement between the World Meteorological Organization and the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (Entry into force in 2003).

Other agreements

(42) Special Agreement between the European Union and Switzerland for exchange of information in case of a nuclear accident.

(43) Special Agreement between the European Union and The Former Yugoslav Republic of Macedonia for exchange of information in case of a nuclear accident.

(44) Special Agreement between the European Union and The Kingdom of Norway for exchange of information in case of a nuclear accident.

Interagency arrangements

(45) Working Arrangements between the International Civil Aviation Organization and the World Meteorological Organization (ICAO Doc 7475).

(46) Meteorological assessment support in a nuclear emergency — cooperative arrangements between WMO and IAEA, March 2003.

(47) Practical Arrangements between the International Atomic Energy Agency and the Pan American Health Organization, 2012.

(48) Information exchange and technical support in relation to food and agriculture in the case of a nuclear or radiological emergency — cooperative arrangements between FAO and IAEA, July 2007.

(49) Concept of Operations for response to nuclear or radiological emergency — cooperative arrangements between WHO and IAEA Secretariats, February 2003.

(50) Memorandum of Understanding between the European Commission and the EURDEP Member States.

Regulations, directives, decisions and other resolutions

(51) EU Council Decision of 14 December 1987 on Community arrangements for the early exchange of information in the event of a radiological emergency (87/600/Euratom).

(52) EU Council Regulation of 22 December 1987 laying down maximum permitted levels of radioactive contamination in foodstuffs and animal feeding stuffs following a nuclear accident or any other case of radiological emergency (87/3954/Euratom).

(53) Decision No 1313/2013/EU of the European Parliament and of the Council on a Union Civil Protection Mechanism.

(54) Regulation No 375/2014 of the European Parliament and the Council on establishing the European Voluntary Humanitarian Aid Corps ('EU Aid Volunteers initiative').

(55) Regulation (EC) No 1257/96 concerning humanitarian aid.

(56) Decision No 2119/98/EC of the European Parliament and of the Council of 24 September 1998 setting up a network for the epidemiological surveillance and control of communicable diseases in the Community.

(57) 2000/57/EC: Commission Decision of 22 December 1999 on the early warning and response system for the prevention and control of communicable diseases under Decision No 2119/98/EC of the European Parliament and of the Council.

(58) IAEA Board of Governors: GOV/1999/15: Financing of the discharge of Agency obligations under the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a

Nuclear Accident or Radiological Emergency, including the provision of assistance by the Agency in the event of a Nuclear Accident or Radiological Emergency.

(59) IAEA Board of Governors: GOV/2004/40 (Corrected): Measures to strengthen international cooperation in Nuclear, Radiation and Transport Safety and Waste Management: International action plans for strengthening the international preparedness and response system for nuclear and radiological emergencies, and on the decommissioning of nuclear facilities.

(60) UNEP GC Decision 22/8 of 7 February 2003 — Further improvement of environmental emergency prevention, preparedness, assessment, response and mitigation.

(61) UNEP GC Decision 21/17 of 9 February 2001 — Further improvement of environmental emergency prevention, preparedness, assessment, response and mitigation.

(62) UNEP GC Decision 20/8 of 5 February 1999 — Further improvement of the international response to environmental emergencies.

(63) UNEP GC Decision 19/9 of 7 February 1997 — Improvement of the international response to environmental emergencies.

(64) UNEP GC Decision 18/19 of February 1995 — Improvement of the international response to environmental emergencies.

(65) UNEP GC Decision 16/37 of May 1991 — Early warning and forecasting of environmental emergencies.

(66) UNEP GC Decision 17/5 of May 1993 — Application of environmental norms by military establishments.

(67) UNEP GC Decision 15/39 of May 1989 — Industrial accidents.

(68) WHO World Health Assembly Resolution WHA55.16 of 18 May 2002: Global public health response to natural occurrence, accidental release or deliberate use of biological and chemical agents or radio-nuclear material that affect health.

(69) WHO World Health Assembly Resolution WHA58.3 of 23 May 2005: Revision of the International Health Regulations.

(70) WHO World Health Assembly Resolution WHA59.22 of 27 May 2006: Emergency preparedness and response.

(71) Guidelines on the Use of Foreign Military and Civil Defence Assets in Disaster Relief — "Oslo Guidelines" — Rev. 1.1 (November 2007).

(72) Guidelines on the Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies — [MCDA Guidelines] — Rev. 1 (January 2006).

(73) Safety Framework for Nuclear Power Source Applications in Outer Space [endorsed by the Committee on the Peaceful Uses of Outer Space at its fifty-second session and contained in A/AC.105/934], UNCPUOS, IAEA (2009).

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Standards

(1) FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL CIVIL AVIATION ORGANIZATION, INTERNATIONAL LABOUR ORGANIZATION, INTERNATIONAL MARITIME ORGANIZATION, INTERPOL, OECD NUCLEAR ENERGY AGENCY, PAN AMERICAN HEALTH ORGANIZATION, PREPARATORY COMMISSION FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION, UNITED NATIONS ENVIRONMENT PROGRAMME, UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS, WORLD HEALTH ORGANIZATION, WORLD METEOROLOGICAL ORGANIZATION, Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015).

(2) EUROPEAN COMMISSION, FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL LABOUR ORGANIZATION, OECD NUCLEAR ENERGY AGENCY, PAN AMERICAN HEALTH ORGANIZATION, UNITED NATIONS ENVIRONMENT PROGRAMME, WORLD HEALTH ORGANIZATION, Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA Safety Standards Series No. GSR Part 3, IAEA, Vienna (2014).

(3) Council Directive 2013/59/Euratom of 5 December 2013 Laying Down Basic Safety Standards for Protection against the Dangers Arising from Exposure to Ionising Radiation, and Repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.

(4) International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (INF Code) under the International Convention for the Safety of Life at Sea of 1 November 1974.

(5) Code of Safety for Nuclear Merchant Ships, 1982.

(6) JOINT FAO/WHO FOOD STANDARDS PROGRAMME, Codex General Standard for Contaminants and Toxins in Food and Feed, Schedule I — Maximum and Guideline Levels for Contaminants and Toxins in Foods, Radionuclides (CODEX STAN 193-1995), FAO, Rome (2010).

Appendix B

APPENDIX B
Authorities, responsibilities and capabilities of participating organizations

This appendix describes the authorities, responsibilities and capabilities of each participating organization with regard to emergency preparedness and response to nuclear or radiological emergencies, both within their own organizations and in support of development in their Member States.[50]

COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION (CTBTO)

Address

Routine Contact

CTBTO Preparatory Commission
Vienna International Centre
PO Box 1200
1400 Vienna, Austria
http://www.ctbto.org

Emergency Contact

For details, see the USIE address book

Responsibilities and authorities

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere: on the Earth's surface, in the atmosphere, underwater and underground. Since the treaty is not yet in force, the organization is called the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Organization (CTBTO). It was founded in 1996 and is based in Vienna.

The treaty has a unique and comprehensive verification regime to make sure that no nuclear explosion goes undetected. This regime consists of three pillars:

(1) The International Monitoring System (IMS)
The IMS will, when complete, consist of 337 facilities worldwide to monitor the planet for signs of nuclear explosions. The IMS uses the following four technologies:

[50] The following texts have been provided by the respective organizations.

- *Seismic:* 50 primary and 120 auxiliary seismic stations monitor shock waves in the Earth. The vast majority of these shock waves — many thousands every year — are caused by earthquakes.

- *Hydroacoustic:* 11 hydrophone stations 'listen' for sound waves in the oceans. Sound waves from explosions can travel extremely far underwater.

- *Infrasound:* 60 stations on the surface can detect ultra-low-frequency sound waves (inaudible to the human ear) that are emitted by large explosions.

- *Radionuclide:* 80 stations measure the atmosphere for radioactive particles; 40 of them also pick up noble gas. They are supported by 16 radionuclide laboratories.

(2) The International Data Centre.
The International Data Centre at the CTBTO's headquarters in Vienna receives the data from the global monitoring stations. The data are processed and distributed to the CTBTO's Member States in both raw and analysed forms.

(3) On-Site Inspections
On-site inspections can be dispatched to the area of a suspicious nuclear explosion if the data from the IMS indicate that a nuclear test has taken place there. Inspectors will collect evidence on the ground at the suspected site. Such an inspection can only be requested and approved by Member States once the CTBT has entered into force.

Organization

The Provisional Technical Secretariat of the CTBTO is headed by an Executive Secretary. It has five divisions, three of which deal with issues related to technical verification: the International Monitoring System Division (IMS), International Data Centre Division (IDC) and On-site Inspection Division (OSI). The Division of Administration and the Legal and External Relations Division perform their respective tasks. The work of the technical divisions is evaluated by the Evaluation Section, which reports directly to the Executive Secretary.

Capabilities and arrangements

Four technologies are used by the CTBTO in the global monitoring networks that it operates to detect seismic, hydroacoustic, infrasound and radionuclide signals. All stations in the global network must meet stringent specifications and be operated in accordance with common procedures. Data are monitored constantly to ensure not only their own quality, but also the quality of the products that are derived from them. Both automatic and human reviewed analysis results are produced, including estimates of the possible source regions for detected radionuclides that are based on Atmospheric Transport Modelling. All States that are parties to the treaty have access to the data and any processing result derived from that data through delivery mechanisms.

CTBT related information is useful in forming a picture of the global and local radiological situation. The CTBTO's globally distributed and highly sensitive radionuclide stations have an excellent detection capability for a large set of fission and activation products. The monitoring network and the PTS processing capabilities allow the PTS to assess the conditions causing the release at the source location and to provide information on the global radiological situation, including predictions of when detections were expected at the radionuclide stations.

CTBTO can provide:

- The results and expertise of the PTS that are relevant to the IACRNE. They could be shared through joint meetings and mutually agreed data sharing mechanisms.
- More generally, expertise, data and analysis results related to local and global atmospheric radiological situations.

EURO-ATLANTIC DISASTER RESPONSE COORDINATION CENTRE (EADRCC) OF THE NORTH ATLANTIC TREATY ORGANIZATION

Address

Routine Contact

Euro-Atlantic Disaster Response Coordination Centre
NATO HQ
Boulevard Leopold III
1110 Brussels
Belgium
http://www.nato.int/eadrcc/home.htm

Emergency Contact

Duty Officer

For details, see the USIE address book

Responsibilities and authorities

The EADRCC was established in 1998 as a partnership tool of NATO Civil Emergency Planning and is NATO's principal civil emergency response mechanism, involving 41 partner countries in addition to NATO's 28 Member States. The Centre stands ready, all year round, on a 24 hour basis, to respond to civil emergency situations in the Euro-Atlantic area, and to function as a clearing house mechanism for the coordination of requests and offers of assistance.

The EADRCC is a 'one stop shop' for information sharing on disaster assistance and consequence management activities in case of natural and technological disasters as well as, following September 2001, for requests for assistance in the event of a major chemical, biological, radiological, nuclear (CBRN) incident in the geographical area of its allies and partners. The coordination activities involve close cooperation with NATO Military Authorities (NMAs) and consultations with the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the European Union and other relevant international organizations (IOs).

In order to enhance cooperation and to practise responses to simulated natural and human-made disaster situations and consequence management, the EADRCC organizes annually a large scale international exercise.

Organization

The EADRCC is part of the International Staff's Operations Division of NATO Headquarters and is staffed by members of the International Staff and Voluntary National Contribution (VNCs) seconded from allies and partner countries.

Capabilities and arrangements

Two key instruments have been developed to implement and assist NATO's civil emergency planning activities:

- The Civil Capabilities Catalogue, which comprises areas of civilian expertise that can be used during crisis response operations. About 400 experts are selected based on specific areas of support frequently required, including crisis management, consequence management and critical infrastructure, to participate in training and respond to requests for assistance. They can be deployed individually or as part of a team (the Rapid Reaction Team);
- The Rapid Reaction Team, which is composed of civil experts and can be deployed within 48 hours to assess civilian requirements across the functional areas of transport, communications, civil protection, industrial planning and supply, medical matters, and food and agriculture.

The EADRCC maintains an *Inventory of National CBRN Consequence Management Capabilities,* which comprises the key types of capabilities that would be critically required for immediate response needs in case of a CBRN incident or attack against civilian populations.

Nations responding to an incident involving CBRN agents can request the EADRCC to assist in the coordination of the response to this incident. The EADRCC will use the *Inventory* to identify the resources requested by the stricken nation and will act as a clearinghouse for assistance in case of CBRN incidents in the same manner as it does for natural and technological disasters.

EUROPEAN COMMISSION (EC)

Address

Routine Contact	Emergency Contact
European Commission 200 rue de la Loi/Wetstraat 200 B-1049 Brussels BELGIUM http://ec.europa.eu/ http://ec.europa.eu/energy/nuclear/radiation_protection/radiation_protection_en.htm	EC ECURIE Contact Point For details, see the USIE address book

Responsibilities and authorities

The European Commission, established in 1958, is the executive of the European Union and is responsible for developing and proposing legislation, implementing decisions and ensuring that EU treaties are upheld.

The Commission is made up of a 28 member College of Commissioners and an administrative body of about 23 000 European civil servants who are split into Directorates-General (DGs) and Services.

Many departments (DGs) could be involved in the response to a large scale radiation emergency. The most likely to be concerned are the DGs for Health and Food Safety (SANTE), Humanitarian Aid and Civil Protection (ECHO), Joint Research Centre (JRC), Secretariat-General (SG), Communication (COMM) and finally DG ENERGY (ENER), which has specific responsibilities for information exchange in the event of a

radiological emergency and as such has the most important role in dealing with the Member States and international organizations in this case.

The Commission represented by DG ENER D/3 is responsible for the practical implementation of the post-Chernobyl Council Decision 87/600/Euratom via its European Urgent Radiological Information Exchange (ECURIE) system.

The ECURIE system is not limited to EU Member States but also includes the former Yugoslav Republic of Macedonia (FYROM), Norway and Switzerland.

Under ECURIE arrangements, a Member State is obliged to notify the Commission immediately when it decides to take measures of a widespread nature in order to protect the general public in the case of a radiological emergency. In turn, the Commission has a responsibility to ensure that all other Member States are informed of this on an urgent basis.

Further responsibilities of the Commission are that it must render applicable maximum permissible levels of radioactive contamination for foodstuffs and animal feeding stuffs and communicate information about cases of non-compliance among EU Member States.

In addition, it must provide to all Member States information it receives on the radiological situation in Member and non-Member States. This it does via the European Urgent Radiological Data Exchange Platform (EURDEP).

To this end, the European Commission has the responsibility to maintain its preparedness to forward initial and subsequent additional information to ECURIE Member States[51] and to implement the Community foodstuff and animal feedstuff regulations in emergency situations.

While it has no formal obligation to do so, the Commission also coordinates a number of activities to improve emergency preparedness and to promote related research not only within the EU Member States but also in many parts of the world, especially in Central and Eastern European countries.

Organization

The Contact Point for the European Commission for nuclear and radiological emergencies is the Emergency Response Coordination Centre (ERCC), which is manned on a 24/7 basis and operated by DG ECHO. The competent authority in these matters is DG ENER's D3, Radiation Protection unit. This office maintains a duty officer on 24 hour standby in order to react to notification by EU Member States, Switzerland, FYROM and Norway or international organizations.

In case of an initial notification under Council Decision 87/600/Euratom, the ECURIE Duty Officer carries out the Commission's legal obligations. The ECURIE Emergency Team (made up of DG ENER personnel) staff the ECURIE emergency rooms and deal with all other matters such as communication with internal and external services, international organizations and the production of status reports and draft press briefings. DG ENER also engages an external contractor in order to support the emergency team in case of activation.

[51] European Union Member States, the former Yugoslav Republic of Macedonia, Norway and Switzerland.

Capabilities and arrangements

The European Commission cooperates with its Member States, Candidate Countries and neighbouring States in the field of emergency preparedness in order to improve and harmonize preparedness arrangements in Europe. The following projects have important functions in emergency preparedness:

- EURDEP is an official part of the ECURIE system and is a platform for the exchange of data from national environmental radiation monitoring networks. Data is continuously exchanged through EURDEP, but the frequency of update can be intensified in the case of a nuclear or radiological emergency. Participation in the EURDEP system is not limited to EU Member States and it currently consists of 36 countries spanning an area from Iceland in the west to the Russian Federation in the east. The network consists of about 5000 automatic, on-line monitoring stations providing coverage of virtually the entire European continent. While the EURDEP system itself does not have an alerting function, the information appearing on it may serve to produce or confirm dispersion predictions during an emergency. EURDEP technology is the basis for the future IAEA global International Radiation Monitoring Information System (IRMIS). IRMIS is also supported from a technical point of view by the EC's JRC.

- The Early Warning Response System (EWRS)[52] which is run by DG SANTE in cooperation with the European Centre for Disease Prevention and Control (ECDC) is the early warning system for health threats including CBRN attacks.

- The RODOS (Real-time On-line Decision Support) system provides tools for decision making and situation assessment in nuclear emergency response. The tools include not only atmospheric dispersion but also the subsequent dispersion in the environmental compartments and the consequent potential exposure and health risk to the general public.

Apart from the power to implement Community-wide restrictions on the use of foodstuffs and animal feeding stuffs, the European Commission has no responsibility for deciding on countermeasures within the European Union; this remains a national matter. However, it may coordinate the provision of assistance between Member States through its humanitarian office and civil protection mechanism (DG ECHO).

In addition, the Commission supports and/or funds training courses for off-site emergency planning and response for experts in the Member States and Candidate Countries, along with various other EPR related initiatives, such as studies and workshops.

[52] See: http://ec.europa.eu/health/communicable_diseases/early_warning/index_en.htm

EUROPEAN POLICE OFFICE (EUROPOL)

Address

Routine Contact

Eisenhowerlaan 73
2517 KK The Hague
The Netherlands

P. O. Box 90850
2509 LW The Hague
The Netherlands
http://www.europol.europa.eu

Emergency Contact

Unit responsible for nuclear and radiological issues
Operations Department
Counter Terrorism Unit – O4

For details, see the USIE address book

Responsibilities and authorities

EUROPOL is the European Union's law enforcement agency. Its aim is to help achieve a safer Europe by supporting the law enforcement agencies of European Union Member States in their fight against serious international crime and terrorism.

More than 750 staff at EUROPOL headquarters in The Hague, the Netherlands, work closely with law enforcement agencies in the 28 EU Member States and with other partners.[53]

EUROPOL officers have no direct powers of arrest — they support law enforcement colleagues by gathering, analysing and disseminating intelligence and coordinating operations. EUROPOL's partners use this input to prevent, detect and investigate offences, and to track down and prosecute those who commit them. EUROPOL experts and analysts take part in Joint Investigation Teams which help solve criminal cases on the spot in EU countries.

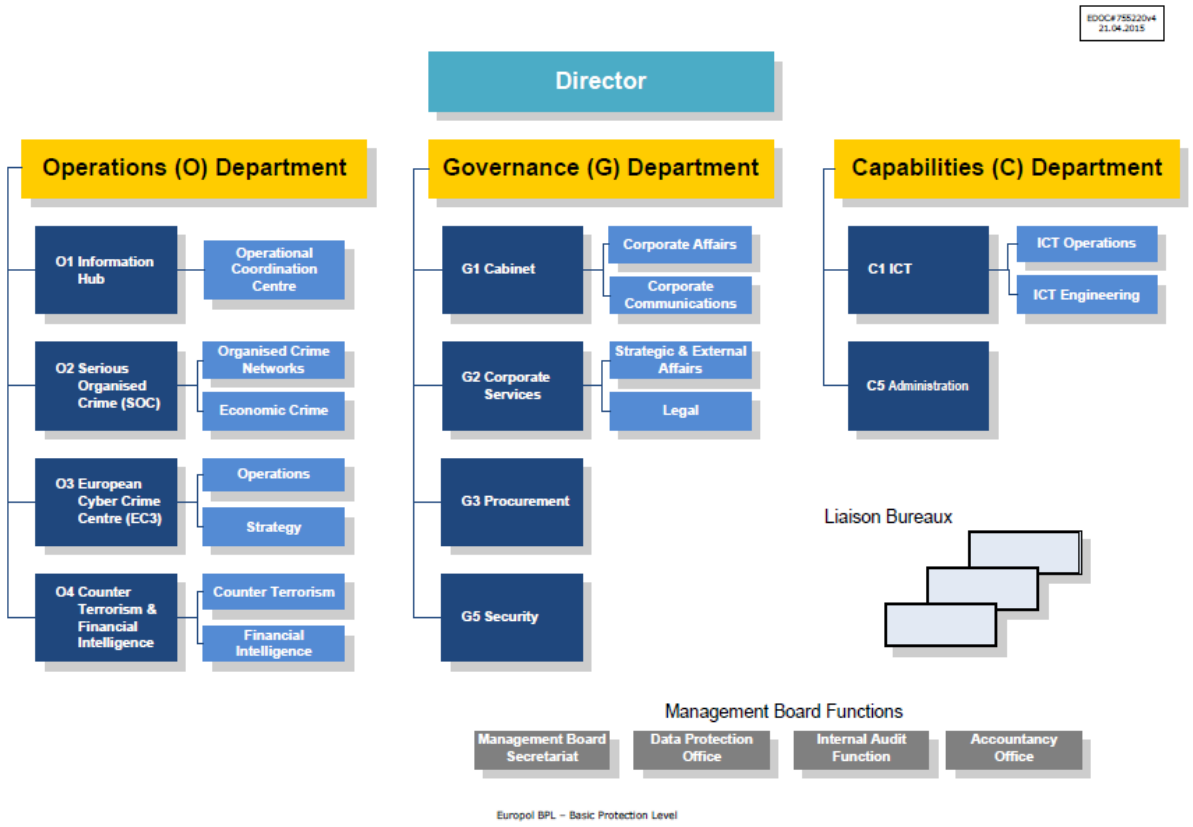
EUROPOL personnel come from different kinds of law enforcement agencies, including regular police, border police, customs and security services. This multi-agency approach helps to mitigate information gaps and minimize the space in which criminals can operate.

Some 145 EUROPOL Liaison Officers (ELOs) are based at EUROPOL headquarters. These ELOs are seconded to EUROPOL by the EU Member States and our non-EU partners. They guarantee fast and effective cooperation based on personal contact and mutual trust.

[53] https://www.europol.europa.eu/content/page/eu-institutions-133
https://www.europol.europa.eu/content/page/eu-agencies-135
https://www.europol.europa.eu/content/page/external-cooperation-31

Organization

The following diagram illustrates the organizational structure of EUROPOL.



Capabilities and arrangements

EUROPOL develops EU-wide intelligence on criminal activities, which allows the preparation of appropriate decisions and the finding of effective measures in the fight against serious organized crime and terrorism. Its added values are:

- Multi-agency approach (law enforcement, security services, customs);
- Multi language institution;
- Quick information exchange;
- European crime overview;
- Investigation support (operational, technical, analytical);
- Expertise, training and European projects;
- Research and development;
- Legal platform for the management of EU-wide law enforcement databases;
- Joint Investigative Teams.

EUROPOL has arrangements for the following:

- A 24/7 emergency system which involves liaison officers from all EU Member States and third states based presently at EUROPOL as well as each unit within the EUROPOL Operations Department.
- Standard Operational Procedure for the activation of a contingency team.
- Activation of the First Response Network (FRN) at EU level.

EUROPOL's Counter Terrorism Unit is responsible for dealing with nuclear and radiological related crime, including terrorist activity. In the event of a radiological emergency caused by a suspected or confirmed terrorist or criminal incident or threat, EUROPOL could implement its contingency and business continuity plans. Among other measures, these plans include a 24/7 network of EUROPOL staff and liaison officers of all EU Member States and third states or organizations represented at EUROPOL HQ. In addition, should the level of threat warrant more direct support, EUROPOL could activate a First Response Team as a part of its First Response Network (FRN) mechanism.

The activation of the FRN is the reaction of the competent authorities of Member States and EUROPOL to a major terrorist incident. Based on consultation and agreement between the competent authority of the concerned Member State and the Director of EUROPOL, a team of experts will be called upon to assist an investigation by a Member State during the first four to eight weeks, to facilitate the exchange of information and to assess other necessary measures related to the security of the EU and EU interests abroad.

EUROPOL's Counter Terrorism Unit, on the basis of an all hazards approach to a threat, conducts several projects that are aimed at assisting the EU Member States in developing their capacity to prevent and to respond to chemical, biological, radiological, nuclear and explosives (CBRNE) incidents.

With the support of the European Commission and the EU Member States, EUROPOL has created the European Explosive Ordnance Disposal Network (EEODN). The EEODN is a network of EU explosives and CBRN specialists from the competent authorities of the EU Member States. The main objectives are to facilitate cooperation, share information among EU explosives and CBRN specialists and organize international conferences and joint trainings. The creation of the EEODN community not only improves exchange of information but also facilitates communication and provides a platform for various forms of cooperation among EU Member States, for instance on bilateral or regional bases. The network helps to build trust as a strong foundation for effective cooperation.

In order to ease information exchange, EUROPOL have developed the EU Bomb Data System, a centralized, multilingual, secure database for information on explosives and CBRN available to all 28 EU Member States. The system contains information on incidents involving CBRNE materials and technical data of devices and provides a communication platform for the EEODN community.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

Address

Routine Contacts	Emergency Contact
Food and Agriculture Organization of the United Nations (FAO) Viale delle Terme di Caracalla 00153 Rome, ITALY http://www.fao.org/ http://www-naweb.iaea.org/nafa/index.html	Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture For details, see the USIE address book

Responsibilities and authorities

The Food and Agriculture Organization of the United Nations has statutory functions[54] that are relevant in preparing for, responding to and providing assistance in the event of a nuclear or radiological incident or emergency. Namely, "the Organization shall collect, analyse, interpret and disseminate information relating to nutrition, food and agriculture" (including fisheries, marine products, forestry and primary forestry products). It also shall "promote and, where appropriate, shall recommend national and international action" with respect to, inter alia, the "improvement of the processing, marketing and distribution of food and agricultural products" and the "adoption of international policies with respect to agricultural commodity arrangements."

The functions of the organization also include, among other things:

- To furnish such technical assistance as governments may request in the fields of agriculture and food;
- To organize, in cooperation with the governments concerned, such missions as may be needed to assist them to fulfil the obligation arising from the FAO's constitution;
- To generally take all necessary and appropriate action to promote common welfare by raising levels of nutrition and standards of living, ensuring food security, and securing improvements in the efficiency of the production and distribution of food;
- To support member countries in dealing and having necessary capacity to respond to food and agriculture emergencies.

The FAO is a full party to the Early Notification and Assistance Conventions and, as such, within its constitutional mandate to monitor and evaluate the world food security situation, "is competent to assess the qualitative and quantitative effects of all contaminants including radionuclides on food supplies, and to advise governments on acceptable levels of radionuclides appearing in agricultural, fisheries and forestry products entering national and international trade"[55] and "is competent to advise governments on measures to be taken in terms of the agricultural, fisheries and forestry practices to minimize the impact of radionuclides and to develop emergency procedures for alternative agricultural practices and for decontamination of agricultural, fisheries and forestry products, soil and water."[56] The FAO also provides related assistance upon the request or acceptance of governments, without prejudice to the national competence of each of its Member States.

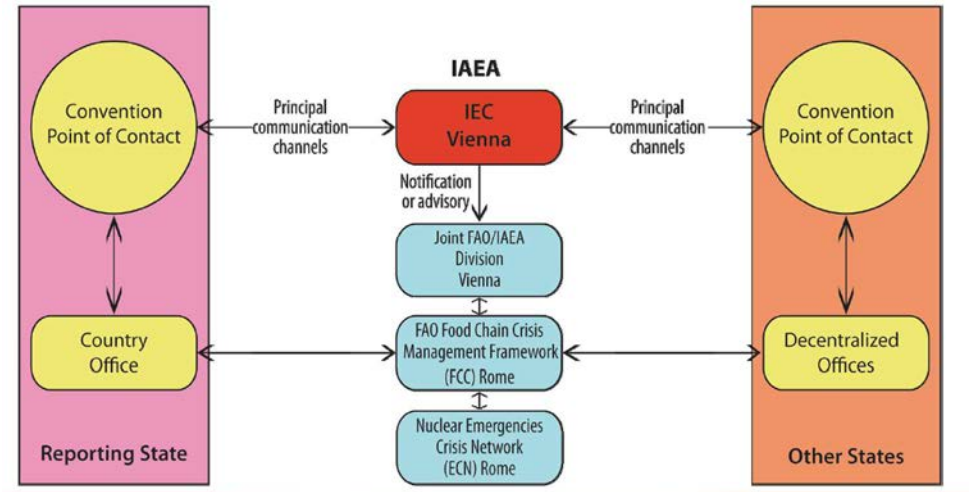
[54] Constitution of the Food and Agriculture Organization of the United Nations.
[55] Convention on Early Notification of a Nuclear Accident, acceded 19 October 1990.
[56] Convention on Assistance in the Case of a Nuclear or Radiological Emergency, acceded 19 October 1990.

With regard to its obligations as a Party to Assistance Convention, and in line with its strategic objective to increase the resilience of livelihoods from disasters, the FAO:

- Cooperates to facilitate prompt assistance in the event of a nuclear accident or radiological emergency to minimize its consequences and to protect life from the effects of radioactive releases;
- May agree on bilateral or multilateral arrangements or, where appropriate, a combination of these, for preventing or minimizing injury and damage which may result in the event of a nuclear accident or radiological emergency;
- Shall promptly decide and notify a requesting State Party, directly or through the IAEA, whether it is in a position to render the assistance requested and the scope and terms of the assistance that might be rendered;
- Shall, within the limits of its capabilities, identify and notify the IAEA of experts, equipment and materials which could be made available for the provision of assistance to other States Parties in the event of a nuclear accident or radiological emergency and the terms, especially financial, under which such assistance could be provided;
- Should, where the assistance involves personnel, designate in consultation with the requesting State, the person who should be in charge of and retain immediate operational supervision over the personnel and the equipment provided by the assisting party. The designated person should exercise such supervision in cooperation with the appropriate authorities of the requesting State;
- Shall make known to the IAEA and to other States Parties, directly or through the IAEA, its competent authorities and point of contact authorized to make and receive requests for and to accept offers of assistance. Such points of contact shall be available continuously, and the IAEA shall promptly be informed of any changes that may occur in the initial information;
- Shall protect the confidentiality of any confidential information that becomes available in connection with the assistance in the event of a nuclear accident or radiological emergency;
- Shall make every effort to coordinate with the requesting State before releasing information to the public on the assistance provided in connection with a nuclear accident or radiological emergency.

Organization

The schematic chart below shows how IAEA and FAO cooperate to notify and provide assistance to States during an emergency:



Capabilities and arrangements

The FAO can provide assistance in (1) assessing radioactive contamination of the agricultural environment and especially foods; (2) applying operational intervention levels as an important tool in the control of intake of radioactive contamination; (3) providing technical advice to countries in the event of radioactive contamination in determining appropriate agricultural countermeasures for medium and long terms; and (4) facilitating international trade of foods (which includes agricultural produce).

It can supply the assistance through the provision of background guidance and scientific information: financial and applied technical assistance on relevant actions and agricultural countermeasures; the fielding of specialized teams; and by providing, in cooperation with the IAEA, analytical services.

The FAO addresses nuclear and radiological emergencies through the FAO Nuclear Emergencies Crisis Network of Technical Experts (ECN), which includes the FAO Emergency and Rehabilitation Division as well as concerned FAO Decentralized Offices as appropriate. The ECN is part of the FAO Food Chain Crisis Management Framework, which manages all food chain crises under the leadership of the Assistant Director General of the FAO Agriculture and Consumer Protection Department. The ECN reports to an ECN Core Group at Director level under the leadership of AGE. This ECN Core Group is responsible for the coordination of FAO response by the various Department and Division members of the ECN.

Under the cooperative arrangements between FAO and IAEA for information exchange and technical support in relation to food and agriculture in the case of a nuclear or radiological emergency, the Joint FAO/IAEA Division (NAFA/AGE) is the FAO focal point and is expected to assign a liaison officer to staff the FAO desk in the IAEA Incident and Emergency Centre (IEC). The Joint FAO/IAEA Division coordinates and ensures dissemination of information between the IEC and ECN, and, as the FAO liaison at the IEC, the Joint Division will report to the ECN Core Group.

Technical input will be drawn from relevant FAO units through the ECN Core Group. The essential aspects may be accessed on the Joint FAO/IAEA Division web site.[57] The FAO ECN Core Group responsibilities include:

- Providing relevant technical information in response to requests from FAO Member States or parties to the Early Notification and Assistance Conventions;
- Ensuring that the FAO Regional, Sub-regional, Country and Liaison Offices are kept informed of any emergency of relevance to them;
- Providing information on countermeasures and decision support products, which covers soil and land, forests, agricultural production including the fisheries sector, animal health and welfare, food safety and measures to facilitate trade;
- Providing support and technical assistance on food and agriculture issues for medium and longer term prevention of contamination or impact on agricultural development and rural populations;
- Maintaining a database of experts;
- Participating in exercises and telecommunications drills.

[57] http://www-naweb.iaea.org/nafa/index.html

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Address

Routine Contacts

International Atomic Energy Agency
Vienna International Centre
P.O. Box 100
1400 Vienna, Austria
Tel. : +43 1 2600 22026 or 22745
Fax : +43 1 26007 29309
Email : iec3@iaea.org
http://www.iaea.org

Emergency Contact

Incident and Emergency Centre

USIE: IAEA emergency web site:

https://iec.iaea.org/usie

For details, see the USIE address book

Responsibilities and authorities

B

The Early Notification Convention and the Assistance Convention are the primary legal instruments that establish an international framework to facilitate the exchange of information and the prompt provision of assistance in the event of a nuclear or radiological emergency, with the aim of mitigating any consequences. These are supplemented by a number of mechanisms and arrangements established by the IAEA Secretariat, the IAEA's policy making organs and the meetings of competent authorities under the Early Notification and Assistance Conventions. Together, these instruments establish the IAEA emergency preparedness and response framework for nuclear and radiological emergencies.[58]

The IAEA has statutory obligations to "establish or adopt…standards of safety for protection of health and minimization of danger to life and property…and to provide for the application of these standards". The recently issued IAEA Safety Standard Series No. GSR Part 7 on Preparedness and Response for a Nuclear or Radiological Emergency describes some of the functions of the IAEA:

- Receive notifications from Member States of a transnational emergency and inform States that may be affected;
- Facilitate the receipt of information by potentially affected States, with the aim of minimizing the consequences;
- Maintain and disseminate appropriately an up to date list of warning points for receiving emergency notifications and information and requests for assistance or verification[59] from the IAEA.

Under the Early Notification and Assistance Conventions, the IAEA is assigned specific functions, in particular:

- Immediately after being notified of an event under the terms of the Early Notification Convention, inform States Parties, Member States and other States that are or may be physically affected and relevant international organizations of a notification received;

[58] This framework is implemented by the IAEA independent of whether or not the Early Notification and Assistance Conventions have been invoked.
[59] The process of confirming that the information in a message is properly understood and accurate.

- Promptly provide any State Party, Member State or relevant international organization with the information received (consistent with confidentiality constraints);
- Cooperate with States to facilitate prompt assistance to minimize consequences and to protect life, property and the environment from the effects of radioactive releases;
- Use its best endeavours to promote, facilitate and support the cooperation between States Parties;
- Promptly transmit a request for assistance to other States and international organizations which may possess the necessary resources;
- If so requested by the requesting State, coordinate the provision of requested assistance at the international level;
- Transmit requests for assistance and relevant information;
- Make available to a State Party or a Member State requesting assistance in the event of a nuclear accident or radiological emergency appropriate resources allocated for this purpose, including resources for conducting an initial assessment of the accident or emergency;
- Offer its good offices to the States Parties and Member States in the event of a nuclear accident or radiological emergency;
- Establish and maintain liaison with relevant international organizations for the purposes of obtaining and exchanging relevant information and data, and make a list of such organizations available to States Parties, Member States and the aforementioned organizations;
- Provide an up to date list of competent (national) authorities and (national) points of contact and points of contact of international organizations and provide it to State Parties, Member States and to relevant international organizations.

The IAEA also evaluates planned and/or implemented protective actions and other response actions to assess if they are in broad compliance with the relevant international practice (i.e. IAEA safety standards). Moreover, the IAEA broadly assesses the likely emergency progression and shares results with States and international organizations to assist them in their own judgement of the situation.

In addition, the IAEA:

- Verifies rumours of nuclear or radiological emergencies and provides authoritative information to requesting parties, without undue delay;
- Ensures that Member States' representatives are appropriately briefed on any developing situation;
- Ensures that there are frequent, accurate and reliable releases of information to the media in coordination with the relevant States and other relevant international organizations;
- Interacts with other relevant international organizations to coordinate the response of international organizations to a nuclear accident or radiological emergency or a request for assistance;
- Provides timely, factually correct, objective and easily understandable information including analysis of available official information, assessment of potential radiological consequences and prognosis of possible emergency progression;
- Reviews the response by the notifying State and by affected States to identify areas where significant gaps in the response with regard to nuclear/radiation safety may exist, and, in those cases, to offer the good offices and advice of the IAEA.

The IAEA has also the following specific obligations with regard to preparedness actions:

- Collect and disseminate to States Parties and Member States information concerning: (i) experts, equipment and materials that could be made available in the event of nuclear accidents or radiological emergencies; (ii) methodologies, techniques and available results of research relating to response to nuclear accidents or radiological emergencies;
- Assist a Member State when requested in preparing both emergency plans in the case of nuclear accidents or radiological emergencies and the appropriate legislation;
- Develop appropriate training programmes for personnel to deal with nuclear accidents and radiological emergencies (including radiation emergency medical training programmes and materials in cooperation with WHO);
- Develop appropriate radiation monitoring programmes, procedures and standards;
- Conduct investigations into the feasibility of establishing appropriate radiation monitoring systems;
- Establish and maintain liaison with relevant international organizations for the purpose of obtaining and exchanging relevant information and data, and make a list of such organizations available to States Parties, Member States and the aforementioned organizations;
- Maintain an up to date list of national authorities and points of contact and of points of contact of relevant international organizations and provide it to States Parties and Member States and to relevant international organizations.

In support of its statutory obligations the IAEA:

- Issues safety standards and guides on and tools for emergency preparedness and response;
- Issues associated training material and computer tools which form the basis of technical cooperation support;
- Maintains a comprehensive emergency preparedness and response capacity building programme;
- Provides assistance to Member States in their capacity building efforts;
- Provides guidance for its Member States on emergency monitoring methods, procedures and strategies, and assists in the development of emergency plans and associated training material;
- Provides legal advice to help Member States and States Parties conclude bilateral/multilateral agreements on emergency preparedness and response;
- Offers an emergency preparedness review (EPREV) service to appraise the adequacy of national emergency planning arrangements and emergency exercises;
- Organizes meetings, conferences and symposia in order to provide the opportunity for information exchange on the results of recent research, policy directions and guidance, practical arrangements and consultation with Member States and States Parties to the Conventions.

In support of the implementation of the Early Notification Convention, the IAEA developed and now maintains the Operations Manual for Incident and Emergency Communication (IEComm).

Supporting the implementation of the Assistance Convention, the IAEA developed and maintains the IAEA Response and Assistance Network (RANET). RANET is a network of States capable and willing to provide assistance or advice in different areas of response to nuclear or radiological emergencies ranging from emergency mitigation to consequence management and recovery operations.

Organization

The IAEA fulfils its roles through its **Incident and Emergency System (IES)** and the **Incident and Emergency Centre (IEC),** which is the IAEA's focal point for emergency preparedness and response and the custodian of the IES.

The IAEA actions that need to be implemented on a short term basis are organized through: (1) a **warning point**, (2) an **on-call system**, (3) an **on-duty system** and (4) an **IES Steering Group**.

The **warning point** is a communication centre staffed on a 24 hour basis, through which incoming messages are received and acted on. Since the IEC is not normally tended to continuously, the Security Control Centre of the United Nations Safety and Security Service serves as a warning point.

The **on-call system** ensures that the initial response to any incoming message is timely and adequate. The following on-call officers shall be available to facilitate and coordinate the initial response: an emergency response manager (ERM); a nuclear installation specialist; a radiation safety specialist; a nuclear security specialist; an external event specialist; and a logistics support officer. In addition, a public information officer shall also be available at all times.

The **on-duty system** ensures that the IAEA's response is managed and coordinated from only one focal point within its secretariat — the IEC. It consists of two modes of operations (activation levels) — commensurate with the nature and magnitude of the event/situation — and a set of response functions (on-duty officers). The modes of operation are as follows:

Normal/Ready mode — the IEC is the focal point for incoming messages. It is not staffed continuously. On-call officers are available to immediately respond to incoming messages. This mode includes all day-to-day activities designed to ensure readiness and is the default condition in which the IEC is maintained. The IEC remains in this mode through the initial discussions of any incoming message regarding a situation with apparent, suspected or potential radiological consequences, particularly before the situation has been confirmed. Assistance missions may be deployed in response to a request for assistance.

Basic response mode — the IEC is not staffed continuously. On-call officers remain available to immediately respond to incoming messages. If appropriate, some staff may be activated and additional staff may be placed on standby, and preparations may be implemented to move rapidly to full response mode. Activated staff make extra assessments during office hours. Assistance missions may be deployed in response to a request for assistance.

Full response mode — the IEC is staffed continuously (24 hours a day with shift changes) and manages the IAEA's response actions.

The **IES Steering Group** oversees the IAEA's response and guides the response on matters of policy.

The figure below shows the framework and structure of the IAEA's IES.

With regard to the interaction with other relevant international organizations during emergency response, several positions are relevant:[60]

The **International Organizations Liaison Officer** is the primary focal point who maintains lines of communication between the IAEA and other relevant organizations for the purpose of exchange of information and for sending and receiving offers of assistance from other organizations. In the absence of the IACRNE Secretary, the Liaison Officer activates the interagency response coordination mechanism.

The **IACRNE Secretary** is the focal point for the IACRNE activities and undertakes the following: activates the interagency response coordination mechanism (this Joint Plan and its SOPs), calls and conducts ad hoc IACRNE emergency meetings and keeps meeting records.

The **emergency response manager** is the focal point for the operational management of the IAEA's response.

The **Office of Public Information and Communication** is the focal point for coordination of any media and/or public information activities.

The overall responsibility for the preparedness of the IAEA to respond to nuclear or radiological emergencies, for developing safety standards on emergency preparedness and response and for providing for their implementation by Member States rests with the Deputy Director General, Department of Nuclear Safety and Security. The Head of the Incident and Emergency Centre assumes a specific responsibility for the IAEA's response preparedness.

Preparedness arrangements with other divisions are coordinated through the Liaison Group for Preparedness.

Capabilities and arrangements

To fulfil its roles and responsibilities, the IAEA has qualified and trained human resources as well as a considerable logistic infrastructure. In particular, it may engage teams of technical experts and appropriate logistical support, including emergency funds, a reliable telecommunications system with a high degree of redundancy, secure Internet capabilities, databases and arrangements for rapid field deployment, with appropriate monitoring equipment for round the clock operations if needed.

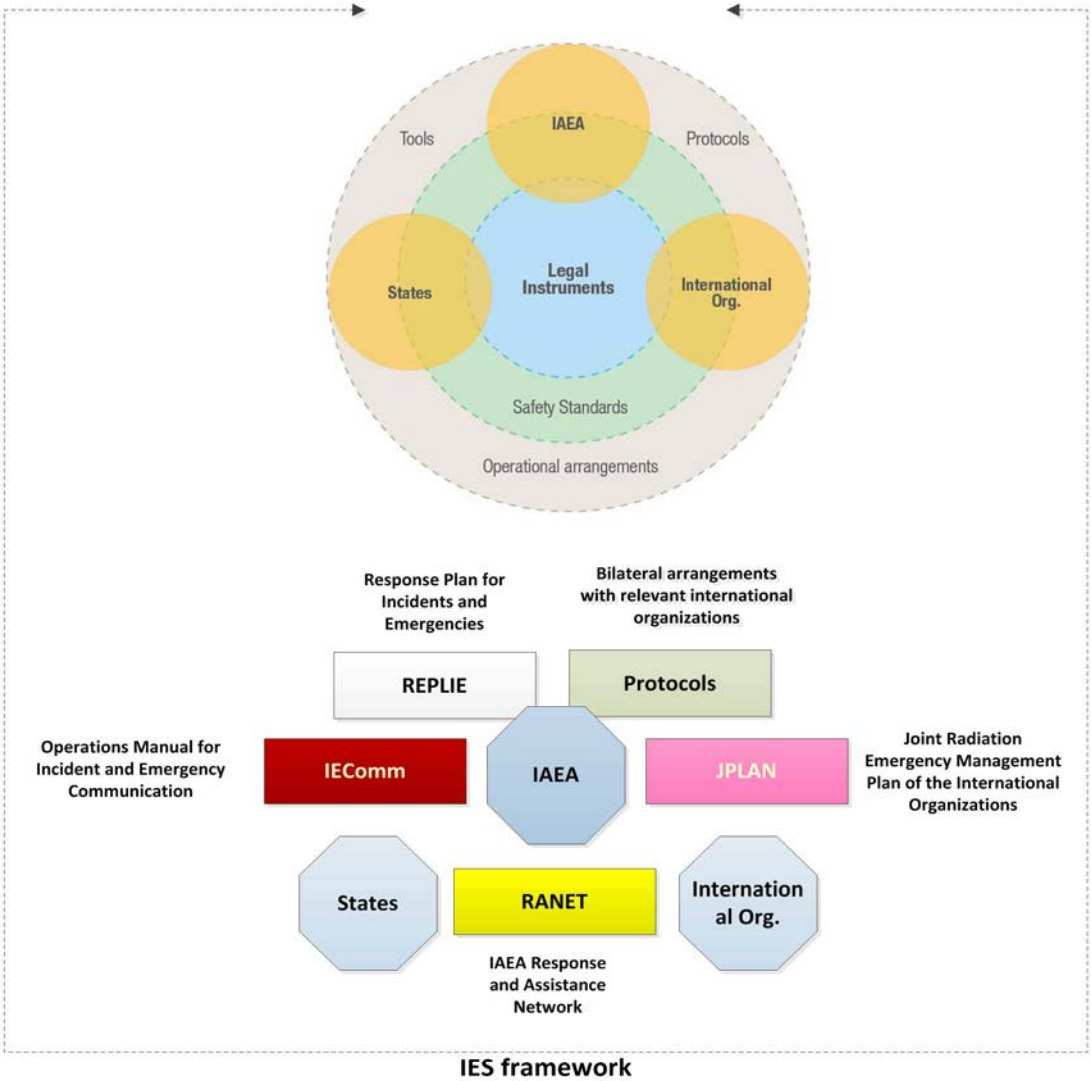
To ensure proficiency in response, a comprehensive in-house training programme is maintained (exercises are used to evaluate performance of assigned response personnel). In addition, the IEC prepares an annual exercise programme (ConvEx exercises) for Member States and international organizations that is made available on the protected USIE web site. The IAEA has also cooperative arrangements (protocols) with relevant international organizations as well as a Memorandum of Understanding with OCHA.[61]

These protocols include arrangements to the effect that, in response to emergencies, organizations may send their liaison officers to the IEC to speed up the coordination process.

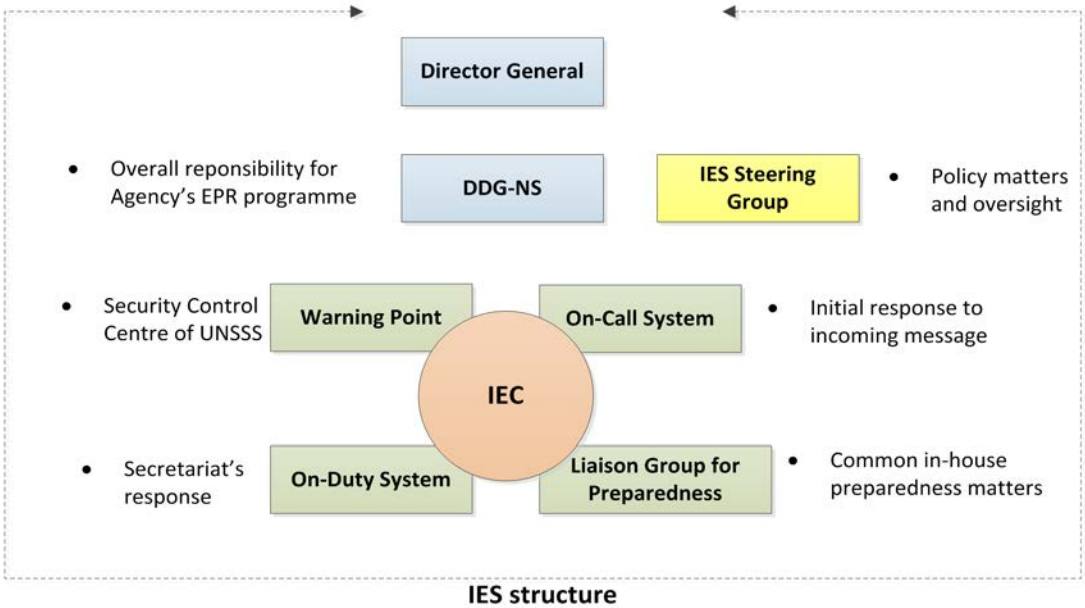
[60] See also IEComm.

[61] Memorandum of Understanding between the Director General of the International Atomic Energy Agency and the United Nations Disaster Relief Co-ordinator, 1977.

B



IES framework



IES structure

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

Address

Routine Contact

International Civil Aviation Organization
999 University Street
Montreal, Quebec, Canada
H3C 5H7
http://www.icao.int/

Emergency Contact

For details, see the USIE address book

Responsibilities and authorities

ICAO is an organization based on the Convention on Civil Aviation signed in 1944. It became a specialized agency of the United Nations in 1947. The aims and objectives of ICAO are to develop standards and recommended practices for international air navigation and to foster the planning and development of international air transport so as to: (a) ensure the safe and orderly growth of international civil aviation throughout the world; (b) encourage aircraft design and operation for peaceful purposes; (c) encourage the development of airways, airports and air navigation facilities for international civil aviation; (d) meet the needs of the people of the world for safe, regular, efficient and economical transport; (e) prevent economic waste caused by unreasonable competition; (f) ensure that the rights of Contracting States are fully respected and that every Contracting State has a fair opportunity to operate international airlines; (g) avoid discrimination between Contracting States; (h) promote safety of flight in international air navigation; and (i) promote generally the development of all aspects of international civil aeronautics.

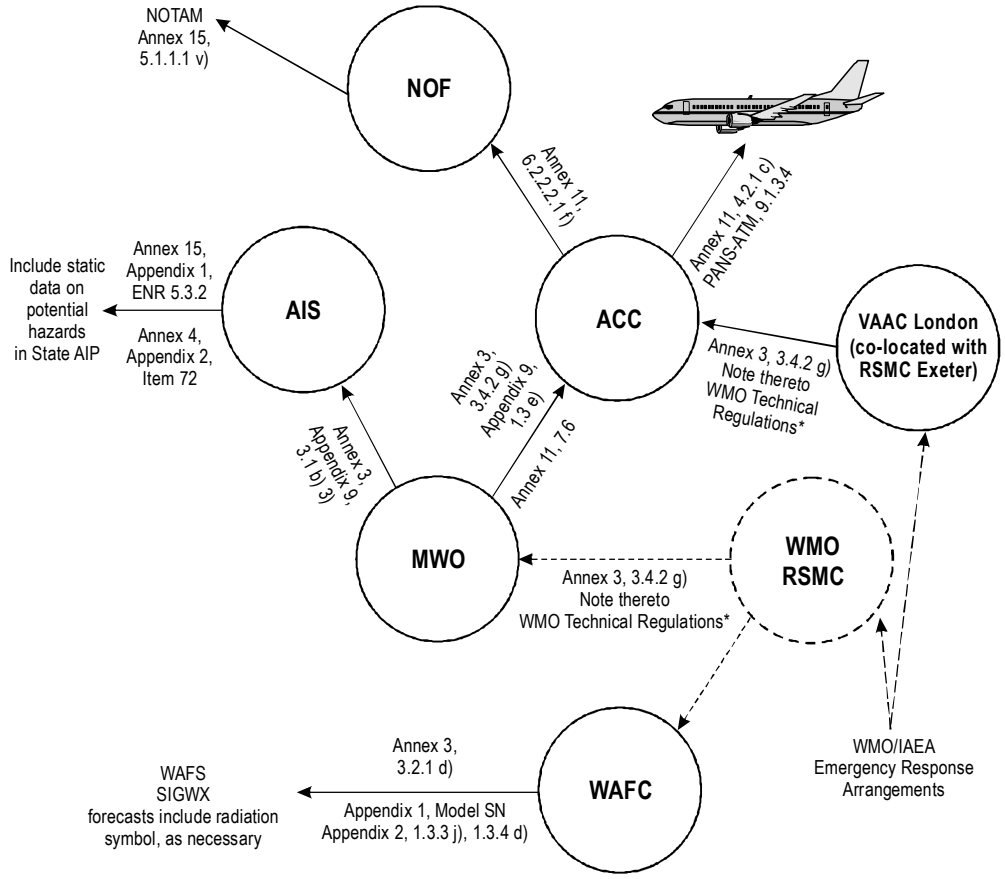
The following responsibilities are attributed to the Contracting States and to the meteorological offices and/or air traffic service units operated by them by virtue of provisions in Annex 3 (*Meteorological Service for International Air Navigation*), Annex 11 (*Air Traffic Services*) and Annex 15 (*Aeronautical Information Services*) to the Convention on International Civil Aviation:

- For world area forecast centres (WAFCs) to receive information concerning the release of radioactive material into the atmosphere, originating from its associated WMO Regional Specialized Meteorological Centre (RSMC) for the provision of transport model products for radiological environmental emergency response, in order to include reference to the information received in significant weather forecasts;
- For the Volcanic Ash Advisory Centre (VAAC) London, as focal point, to receive information concerning the release of radioactive material into the atmosphere, originating from WMO RSMC Exeter, in order to notify area control centres (ACC) concerned about the release;
- For meteorological watch offices (MWOs) to supply information received concerning the release of radioactive materials into the atmosphere, for its area of responsibility in the form of a SIGMET message for the radioactive cloud, to its ACC and flight information centre, as agreed between the meteorological and air traffic services authorities concerned, and to aeronautical information service units, as agreed between the meteorological and appropriate civil aviation authorities concerned;
- For air traffic service units to disseminate the information received to aircraft in flight or to aircraft about to depart for the affected flight information regions (FIR).

Organization

The details pertaining to a release of radioactive materials into the atmosphere — such as the nature, time and exact location of the accident — are to be provided by the IAEA to the WMO warning point for onward distribution to the regional specialized meteorological centres (RSMCs) concerned. Subsequently, this information, together with forecast charts detailing the trajectory and definition of radioactive material in the atmosphere, is promptly disseminated from the WMO RSMCs to meteorological offices providing service to international air navigation for onward communication to ACCs/FICs, aerodromes and airspace users. The ACCs concerned will notify their associated international NOTAM Office (NOF) in order to issue the corresponding notice to airmen (NOTAM) related to the hazard, which is essential for personnel concerned with flight operations. The inclusion of static data on potential hazards is included in a Contracting State's aeronautical information publication (AIP). In addition, the information provided by the IAEA to the WMO warning point for onward distribution to WMO RSMC Exeter, which is co-located with VAAC London, is included in a notification message to the ACCs/FICs concerned that is issued by VAAC London. A symbol indicating "radioactive materials in the atmosphere" is included in the World Area Forecast System (WAFS) significant weather forecast charts issued by the WAFC.

No secretariat personnel are assigned for the communication of information to aircraft in flight and at aerodromes during a real time emergency. Instead, the necessary operational response is the responsibility of the concerned meteorological offices and/or air traffic service units in ICAO Contracting States, as per internationally agreed ICAO provisions. The governing ICAO regulatory provisions are displayed in the figure below.



*In practice, this information is disseminated to MWOs through NMCs.

Capabilities and arrangements

The procedures for the initial notification of meteorological offices and/or air traffic service units providing service for international air navigation that an accident has occurred were developed between the IAEA and ICAO, in coordination with the WMO.

Annexes 3, 11 and 15 to the Convention on International Civil Aviation provide the principal standards and recommended practices concerning aeronautical and meteorological service to international air navigation during a radiation emergency. These international provisions are supported, inter alia, by ICAO guidance and regional air navigation plans, which detail the capabilities of Contracting States, as necessary.

INTERNATIONAL LABOUR ORGANIZATION (ILO)

Address

Routine Contact	Emergency Contact
Labour Inspection, Labour Administration and Occupational Safety and Health Branch International Labour Office Route des Morillons 4 1211 Geneva 22 Switzerland Tel: +41 22 799 6715 Fax: +41 22 799 6878 Email: labadmin-osh@ilo.org	
http://www.ilo.org/labadmin-osh	For details, see the USIE address book

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Responsibilities and authorities

The International Labour Organization (ILO) was established in 1919, in the wake of a destructive war, as part of the Treaty of Versailles as an autonomous part of the League of Nations to pursue a vision based on the premise that universal, lasting peace can be established only if it is based on social justice. It is a tripartite organization, with worker and employer representatives taking part in its work on an equal basis with those of governments for united action in the cause of social justice and better working and living conditions everywhere. In 1946, the ILO became the first specialized agency associated with the United Nations and at present has 187 Member States.

The ILO helps advance the creation of decent work and the economic and working conditions that give working people and business people a stake in lasting peace, prosperity and progress. Its main aims are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work related issues.

The ILO has four strategic objectives:

- Promote and realize standards and fundamental principles and rights at work;
- Create greater opportunities for women and men for decent employment and income;
- Enhance the coverage and effectiveness of social protection for all;
- Strengthen tripartism and social dialogue.

In support of its goals, the ILO offers unmatched expertise and knowledge about the world of work, acquired over more than 90 years of responding to the needs of people everywhere for decent work, livelihoods and dignity. It serves its tripartite constituents — and society as a whole — in a variety of ways, including:

- Formulation of international policies and programmes to promote basic human rights, improve working and living conditions, and enhance employment opportunities;
- Creation of international labour standards backed by a unique system to supervise their application;
- An extensive programme of international technical cooperation formulated and implemented in an active partnership with constituents, to help countries put these policies into practice in an effective manner;
- Training, education and research activities to help advance all of these efforts.

The international labour standards created by the ILO are in the form of conventions and recommendations. These standards, as a package, constitute the International Labour Code, which defines minimum standards in the labour and social fields. Between 1919 and 2015, 189 conventions and 204 recommendations were adopted. Close to 50 per cent of these instruments relate directly or indirectly to occupational safety and health.

Conventions are comparable to multilateral international treaties; they are open to ratification by Member States and, once ratified, become binding obligations. A government that has ratified a convention is expected to apply its provisions through legislation or other appropriate means as indicated in the text of the convention. The government is also required to report regularly on the application of ratified Conventions. The extent of compliance is subject to examination by ILO machinery. Complaints about alleged non-compliance may be made by the governments of other ratifying States or by employers' or workers' organizations, and procedures exist for investigating and acting upon such complaints. Conventions that have not been ratified have the same value as recommendations.

Recommendations are intended to offer guidelines for action by Member States. Often, a particular Recommendation will elaborate upon the provisions of a Convention on the same subject. Member States have certain important procedural obligations in respect of recommendations - namely, to submit the texts to their legislative bodies, to report on the action resulting therein, and to report occasionally at the request of the Governing Body on the measures taken or envisaged to give effect to the provisions, but no specific substantive obligations are entailed.

Radiation protection is part of the ILO's action on the protection of workers against sickness, disease and injury arising out of employment, as mandated by the Organization's Constitution. In 1949, the ILO published a set of practical international standards on radiation protection which were revised and considerably extended in 1957 and were incorporated into the ILO Manual of Industrial Radiation Protection.

In June 1960, the International Labour Conference adopted the Radiation Protection Convention, 1960 (No. 115), and its accompanying Recommendation (No. 114). The Convention applies to all activities involving the exposure of workers to ionizing radiation in the course of their work and provides that each Member of the ILO which ratifies it shall give effect to its provisions by means of laws or regulations, codes of

practice or other appropriate means. So far, this ILO Convention has been the only international legal instrument on the protection of workers against radiation.

In assessing compliance with these requirements, the ILO Committee of Experts on the Application of Conventions and Recommendations (CEACR) has frequently referred to current knowledge as embodied in relevant international standards and has developed principles in particular as regards the purpose and function of the dose limits, including exposure limits during and after an emergency and the provision of alternative employment to workers whose continued working with radiation is contra-indicated for health reasons. Some other international labour standards of the ILO are also relevant to the protection of workers against ionizing radiation, notably the Occupational Cancer Convention and Recommendation (1974); the Working Environment (air pollution, noise and vibration) Convention and Recommendation (1977); and the List of Occupational Diseases appended to the Employment Injury Benefit Convention (1964).

The requirements stipulated in Radiation Protection Convention No. 115 and Radiation Protection Recommendation No. 114 include: restricting the exposure of workers to ionizing radiation to the lowest practicable level and avoiding any unnecessary exposure; dose limits for various categories of workers, such limits to be kept under constant review in the light of current knowledge; appropriate dose limits for workers aged 18 and over and under the age of 18; and prohibition of workers under the age of 16 to work with ionizing radiation. A major contribution from the ILO to radiation protection is the promotion of the right of workers to safety and health while working with radiation, which includes participation, employer and worker cooperation in radiation protection at all stages, training and information.

In 1986, the ILO Governing Body approved the publication of a Code of Practice for the radiation protection of workers (ionizing radiations) which provides practical guidance on the implementation of a radiation protection programme at the enterprise level. The ILO gives importance to cooperation with other international organizations in the radiation protection of workers through joint development and preparation of international standards and guidance. Over the years, the ILO has collaborated closely with the IAEA and other international organizations in the development of international safety standards relevant to the protection of workers. For example, the ILO was a cosponsor of the IAEA Safety Series No. 115, International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources and for the Safety of Radiation Sources (BSS), published in 1996, as well as its 2014 revision (Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA Safety Standards Series No. GSR Part 3); the ILO has also cosponsored IAEA Safety Standards Series No. GSR Part 7 (Preparedness and Response for a Nuclear or Radiological Emergency), published in 2015.

ILO's participation in the work of the Radiation Safety Standards Committee (RASSC) established by the IAEA ensures that the representatives of workers and employers and their organizations directly participate in the formulation of international standards on radiation safety and on occupational radiation protection by the IAEA and other international organizations. This has resulted in a major change from the previous situation, when the established international standards were to apply to employers and workers, with neither of them participating in the development of these standards.

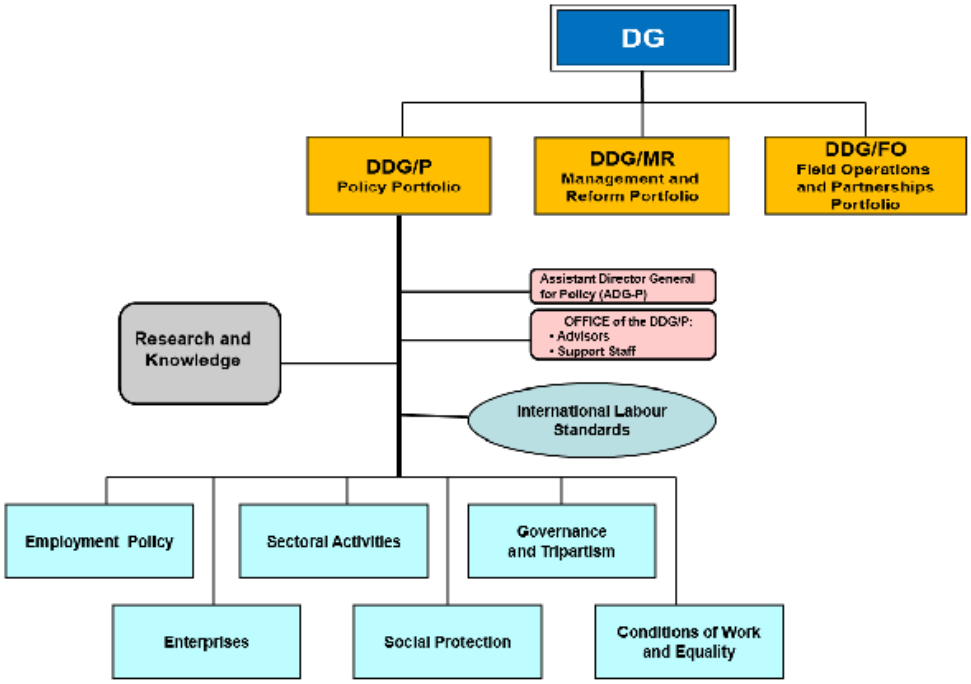
GSR Part 3, GSR Part 7 and the other IAEA safety standards cosponsored by the ILO provide a worldwide basis for harmonized radiation protection standards and complement the ILO Radiation Protection Convention (No. 115). The ILO uses IAEA safety standards to support the implementation of the Radiation Protection Convention and to guide those whose duty it is to promote occupational radiation protection at the national and enterprise levels. These standards are also used by the ILO supervisory machinery to review and examine the application and implementation of Radiation Protection Convention (No. 115) and its accompanying Recommendation (No. 114) by its Member States.

In the field of radiation protection of workers, including emergency workers, the IAEA and ILO have jointly prepared a number of international guides which include guidance on occupational radiation protection in general, assessment of occupational exposure due to internal and external exposures, radiation protection of workers in the mining and milling of radioactive ores, control of exposure to natural radiations at work, protection of emergency workers and arrangements for preparedness for a nuclear or radiological emergency, health surveillances of persons occupationally exposed to ionizing radiation and radiation protection in hospitals and general practices.

B

Organization

The following diagram illustrates the organization of the ILO.



Radiation protection of workers is a part of the work of the Labour Administration, labour Inspection and Occupational Safety and Health Branch under the Governance and Tripartism Department

Capabilities and arrangements

The ILO activities are directed towards the prevention of occupational accidents, injuries and work related diseases. Its expertise lies in the field of engineering, occupational health, industrial hygiene and ergonomics. Activities on subjects such as organization of first aid, statistics of accidents and occupational diseases, compensation of work injuries and rehabilitation are also within the ILO's field of competence. However, ILO's activities are not directly connected with the mitigation of the

consequences of accidents, such as interventions, remedial actions and curative aspects.

In the case of a nuclear accident or radiological emergency, the ILO may reply to requests for information and provide information to its constituents, i.e. employers, workers and governments (labour authorities in particular). The ILO would thus contribute to a coherent dissemination of reliable information.

If the ILO receives a request of information concerning assistance in the case of a nuclear accident and radiological emergency, it provides the necessary information on the international set-up which exists to deal with such emergencies, and it will inform the IAEA, WHO and the relevant international organizations about the potential request for assistance.

It should be added that the ILO does not have equipment or expertise for an intervention after a nuclear accident or in the case of radiological emergency. It is not a funding organization, and the provision of financial assistance in such cases is not part of its role. Advice can be provided on general aspects of occupational health and safety taking into account that the emphasis is on prevention, on organizational aspects (occupational health services) and on emergency planning, rather than on interventions and remedial actions.

While nuclear accidents are not likely to be notified to the ILO, radiological emergencies may be triggered by industrial accidents, and the ILO will inform the IAEA and WHO on information of the industrial accidents brought to its attention through factory inspectors or social security.

INTERPOL

Address:

Routine Contacts	Emergency Contact
INTERPOL General Secretariat 200, Quai Charles de Gaulle, 69006 Lyon FRANCE	Command and Coordination Center
http://www.interpol.int	For details, see the USIE address book

Responsibilities and Authorities

INTERPOL is the world's largest international police organization, with 190 member countries. It facilitates cross-border police cooperation, and supports and assists all organizations, authorities and services whose mission it is to prevent or combat international crime.

The General Secretariat — located in Lyon, France — operates 24 hours a day, 365 days a year, and is run by the Secretary General. Officials from more than 80 countries work side by side in any of the Organization's four official languages: Arabic, English, French and Spanish. The secretariat has seven regional offices: in Argentina, Cameroon, Côte d'Ivoire, El Salvador, Kenya, Thailand and Zimbabwe, and three liaison offices at the United Nations in New York, the European Union in Brussels and EUROPOL in The Hague. In 2015, the INTERPOL Global Complex for Innovation (IGCI) was officially opened in Singapore. It complements the General Secretariat. Its purpose is to enhance

INTERPOL's capability to tackle the crime threats of the 21st century and strengthen international policing worldwide, notably by:

- Innovative research and development to enhance forensics and database capabilities, particularly in the identification of crimes and criminals;
- Addressing the demand for technology and innovation-based capacity building and training;
- Enhancing INTERPOL's capacity to provide 24/7 operational support to police across time zones and distances with greater mobility.

Each INTERPOL member country maintains a National Central Bureau (NCB) staffed by national law enforcement officers. The NCB is the designated contact point for the General Secretariat, regional offices and other member countries requiring assistance with overseas investigations and the location and apprehension of fugitives.

The Organization's I-24/7 global police communications network connects law enforcement officials in all 190 member countries and provides them with the means to share crucial information on criminals and criminal activities.

As criminals and criminal organizations are typically involved in multiple activities, I-24/7 can fundamentally change the way in which law enforcement authorities around the world work together. Pieces of seemingly unrelated information can help create a picture and solve a transnational criminal investigation.

Using I-24/7, NCBs and some field police units can search and cross-check data in a matter of seconds, with direct access to databases containing information on suspected terrorists, wanted persons, fingerprints, DNA profiles, lost or stolen travel documents, stolen motor vehicles, stolen works of art, etc. These multiple resources provide police with instant access to potentially important information, thereby facilitating criminal investigations.

INTERPOL's databases and services ensure that police worldwide have access to the information and services they need to prevent and investigate crimes. INTERPOL manages several databases, accessible to the INTERPOL bureaus in all member countries through its I-24/7 communications network, which contain critical information on criminals and criminality. These include:

- Suspected terrorists;
- Nominal data on criminals (names, photos);
- Fingerprints;
- DNA profiles;
- Lost or stolen travel documents;
- Child sexual abuse images;
- Stolen works of art;
- Stolen motor vehicles.

INTERPOL supports law enforcement officials in the field with emergency support and operational activities, especially in its priority crime areas of fugitives, public safety and terrorism, drugs and organized crime, trafficking in human beings and financial and high-tech crime. When necessary, INTERPOL can deploy an Incident Response

Team (IRT) to support a country or countries in whatever tasks are requested. If existing General Secretariat staff are unable to fulfil the requirements of the requesting country, INTERPOL can request support from its Member States to provide staff to the IRT who will be managed by and responsible to INTERPOL during their work on the IRT. The IRT, including a Disaster Victim Identification Team composed of experts from the General Secretariat and member countries, can be dispatched to the scene within hours of an event.

Another component of this core function is the INTERPOL notice system, which serves to alert police of fugitives, suspected terrorists, dangerous criminals, missing persons or weapons threats. There are currently seven colour coded notices — Red, Blue, Green, Yellow, Black, Orange and Purple – and the INTERPOL-United Nations Special Notice issued for groups or individuals who are the targets of UN sanctions against Al Qaida and the Taliban.

INTERPOL's CBRNE Sub-Directorate consists of three distinct strands: the Chemical & Explosive Terrorism Prevention Unit (CMX TPU); the Biological Terrorism Prevention Unit (Bio TPU); and the Radiological & Nuclear Terrorism Prevention Unit (RN TPU).The INTERPOL CBRNE Sub-Directorate's mission is to counter the CBRNE terrorist threat through the provision of information sharing, intelligence and threat analysis, together with a programme of awareness training and capability/capacity building for the member countries of INTERPOL. Additionally, it provides access to specialized expertise in this particular field of law enforcement.

The INTERPOL CBRNE Monthly Digest summarizes relevant open source reporting about all aspects of CBRNE crime and terrorism and builds upon this, month by month, to provide an analytical perspective of particular news reports of interest, using available data and knowledge.

In support of the 2012 International Nuclear Security Summit held in Seoul, Republic of Korea, INTERPOL initiated Operation Fail Safe as an international operational support initiative to increase global nuclear security.

Operation Fail Safe provides the capability to the international law enforcement community to track the movements of individuals involved in the trafficking of radioactive or nuclear material. It leverages existing INTERPOL tools and processes, including the I-24/7 communications network; the INTERPOL system of Regional Bureaus, NCBs and the General Secretariat; the Command and Coordination Centre (CCC); i-link; and the International Notices system to identify and track individuals involved in the trafficking of radioactive or nuclear materials. The main tool to inform member countries about these individuals is the Green Notice, which alerts countries to an individual's involvement in the trafficking of radioactive or nuclear material upon query, with additional information provided in conjunction with the NCBs through their participation in Operation Fail Safe.

The Criminal Analysis Unit contributes to investigations by assisting officers working at the General Secretariat and in member countries with research and analysis on crime trends. The unit also provides training courses in criminal analysis techniques for member countries.

The CCC operates round the clock in all of INTERPOL's four official languages (Operations Room) and serves as the first point of contact for any member country faced with a crisis situation (Crisis and Major Events Room). The CCC can also assume a coordination role if an attack or disaster involves several member countries or if a member country's own ability to do so has been compromised.

There are various other services which the CCC provides, including the deployment of an INTERPOL Major Event Support Team, the publishing of Orange Notices, which are used to warn police, public institutions and other international organizations about potential threats posed by fugitive terrorists, disguised weapons, parcel bombs and other dangerous objects or materials.

Organization

Capabilities and arrangements

Through its CBRNE Sub-Directorate, which is located within the Counter Terrorism, Public Safety and Maritime Security Directorate, INTERPOL conducts a range of activities and develops capabilities that contribute to the prevention and preparedness of nuclear and radiological emergencies. These include:

- Criminal intelligence assessments of criminals and terrorists and their search for, possession of, and potential use of weapons of mass destruction, including nuclear and radiological devices;
- Issuance of international search and arrest warrants for terrorists and other criminals who might be involved in the trafficking or use of radiological or nuclear devices;

- Receipt and forwarding of messages from national police forces through the NCBs of stolen or recovered radioactive material, primarily when there is an international crime aspect to the incident;
- Publication and distribution of good practice and training in anti-corruption techniques for law enforcement personnel, which could include authorities who would be involved in the handling, monitoring and/or enforcement of radioactive or nuclear materials;
- Issuance of Green Notices under the auspices of Operation Fail Safe concerning persons known to be, or suspected of being, involved in trafficking nuclear or other radioactive material;
- Issuance of Orange Notice information about possible thefts, trafficking or missing nuclear or other radioactive material;
- Facilitating face to face meetings, communication and teamwork among law enforcement personnel worldwide to build formal and informal networks that can be utilized to respond to radiological or nuclear emergencies.

INTERNATIONAL MARITIME ORGANIZATION (IMO)

Address

Routine Contact	Emergency Contact
Marine Environment Division International Maritime Organization 4 Albert Embankment London SE1 7SR United Kingdom Tel: + 44 20 7735 7611 Fax: + 44 20 7587 3210 Email: info@imo.org http://www.imo.org	For details, see the USIE address book

Responsibilities and Authorities

The International Maritime Organization (IMO) is the specialized UN agency responsible for measures to improve the safety and security of international shipping and to prevent marine pollution from ships. It is also involved in legal matters, including liability and compensation issues and the facilitation of international maritime traffic. The IMO is the secretariat to a wide array of international conventions governing all aspects of shipping, several of which are related to the transportation of nuclear substances by sea and to the prevention of, preparedness for and response to pollution incidents from ships.

The IMO has general responsibilities relevant to emergency response in accordance with the OPRC Convention (1990)[62] and its OPRC-HNS Protocol[63]. The OPRC-HNS Protocol, in particular, although not explicitly stating so, would, by its definition of hazardous and noxious substances, also normally extend to marine pollution

[62] International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990.
[63] Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000.

incidents involving nuclear and radioactive substances occurring at sea or in port. The OPRC-HNS Protocol entered into force in June 2007.

Under the provisions of the OPRC-HNS Protocol 2000:

- *A pollution incident by hazardous and noxious substances* (hereinafter referred to as a 'pollution incident') means any occurrence or series of occurrences having the same origin, including fire or explosion, which results or may result in a discharge, release or emission of hazardous and noxious substances and which poses or may pose a threat to the marine environment, or to the coastline or related interests of one or more States, and which requires emergency action or immediate response; and

- *Hazardous and noxious substances* means any substance other than oil which, if introduced into the marine environment is likely to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

IMO's responsibilities under the provisions of the OPRC-HNS Protocol 2000 during an emergency are to perform the following functions and activities, resources permitting, when requested by a party to do so:

- Receive, collate and disseminate on request the information provided by parties and relevant information provided by other sources;
- Analyse the information provided by parties and relevant information provided by other sources and provide advice or information to States;
- Facilitate the provision of technical assistance and advice, upon the request of States faced with major pollution incidents;
- Provide assistance in identifying sources of provisional financing of the costs of assistance for the provision of advisory services, technical support and equipment for the purpose of responding to a pollution incident, when the severity of the incident so justifies.

As provided for under the 1973 Intervention Protocol[64], the IMO also maintains an up to date list of recognized regional centres of expertise with specialized oil and/or HNS preparedness and response, as a source of potential experts for rapid deployment, if required.

While these are the specific responsibilities of the Organization as identified in the Protocol, the IMO is more generally available to:

- Cooperate with other agencies and organizations to facilitate the delivery of assistance in the event of a nuclear accident or radiological emergency involving or affecting a vessel or vessels at sea or in port;
- Serve as a liaison and channel for communications with the maritime community, in the event of nuclear emergencies or radioactive incidents at sea or in port;

[64] International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969.

- Facilitate access to specific technical information and expertise with national maritime focal points and the maritime community at large.

Organization

The IMO, through its Marine Environment Division, has the responsibility for the Organization's role and activities related to emergency preparedness and response to marine pollution incidents.

The professional staff of the Organization consists of technical, scientific and legal staff with particular knowledge on issues related to the protection of the marine environment (prevention of pollution from ships, ballast water management, preparedness and response, etc.) and to maritime safety (ship design and construction, safety of navigation, carriage of cargo, etc.).

The organization maintains direct contact and continuous liaison with the competent authorities of Member States, national maritime authorities and regional maritime organizations, all of which can be accessed and called upon in the event of an emergency.

Capabilities and arrangements

The mission of the IMO is safety and security of international shipping and protection of the marine environment from pollution from shipping. The Organization has no specifically defined role with respect to preparedness and response to nuclear incidents but has developed safety codes, standards and guidelines for nuclear cargoes and nuclear powered ships for the prevention of such incidents, which, in certain cases, also cover elements of preparedness. These include:

(1) International Convention for the Safety of Life at Sea (SOLAS), 1974:

- Chapter VII — Carriage of dangerous goods, Part D — which includes special requirements for the carriage of packaged irradiated nuclear fuel, plutonium and high level radioactive wastes on board ships and requires ships carrying such products to comply with the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (INF Code);

- Chapter VIII, which gives basic requirements for nuclear powered ships and is particularly concerned with radiation hazards. It refers to the detailed and comprehensive Code of Safety for Nuclear Merchant Ships.

(2) Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), 1971, provides that a person otherwise liable for damage caused in a nuclear incident shall be exonerated for liability if the operator of the nuclear installation is also liable for such damage by virtue of the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy; the Vienna Convention of 21 May 1963 on Civil Liability for Nuclear Damage; or national law which is similar in the scope of protection given to the persons who suffer damage.

(3) Code of Safety for Nuclear Merchant Ships, 1981. This code (Resolution A.491(XII)) was developed as a guide for administrations on internationally accepted safety standards for the design, construction, operation, maintenance, inspection, salvage and disposal of nuclear merchant ships.

(4) Safety Recommendations on the Use of Ports by Nuclear Merchant Ships, 1980. This publication provides guidance to host government authorities and host port authorities on the recommended precautionary measures to be considered when assessing the suitability of a port to receive nuclear merchant ships fitted with pressurized water reactors.

The organization also has some basic internal capacity in terms of preparedness for and response to pollution incidents from ships and manages this role through its Marine Environment Division. Emergency functions include tracking of incidents, information gathering, reporting and, on occasion, mobilization of resources and technical assistance upon request by Member States. IMO does not have 24/7 capability.

Furthermore, through its former OPRC-HNS Technical Group and its current Sub-Committee on Pollution Prevention and Response, which is composed of technical experts from Member States and observing organizations, IMO develops tools, resources, manuals and guidance documents to help countries ratify and implement the OPRC Convention and its HNS Protocol and to improve preparedness for and response to oil and HNS incidents at the national and international levels. One example of the types of manuals produced by this group is the Manual on Chemical Pollution, Section 2, Search and Recovery of Packaged Goods Lost at Sea, which also covers the loss of packaged radioactive materials.

In addition, IMO promotes and assists Member States' preparedness efforts through its Integrated Technical Cooperation Programme (ITCP), created for the sole purpose of assisting countries in building up their human and institutional capacities for compliance with IMO's regulatory framework, including the OPRC Convention 1990 and its OPRC-HNS Protocol 2000, which collectively address preparedness, response and cooperation with regard to oil spills and releases of HNS into the marine environment.

NUCLEAR ENERGY AGENCY OF THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD NEA)

Address

Routine Contact	Emergency Contact
OECD Nuclear Energy Agency 46, Quai Alphonse le Gallo 92100 Boulogne-Billancourt France http://www.oecd-nea.org	Radiation Protection and Radioactive Waste Management Division For details, see the USIE address book

Responsibilities and authorities

The mission of the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD) is to assist its member countries in maintaining and further developing, through international cooperation, the scientific, technological and legal bases required for the safe, environmentally friendly and economical use of nuclear energy for peaceful purposes. In order to achieve this, the NEA works as: a forum for sharing information and experience and promoting international cooperation; a centre of excellence which helps member countries to

pool and maintain their technical expertise; a vehicle for facilitating policy analyses and developing consensus based on its technical work.

The NEA has no statutory operational role in the response to nuclear emergency situations, but has, for many years, been actively involved in efforts to improve nuclear accident emergency planning, preparedness and management at the international level, in particular through the development, conduct and evaluation of the International Nuclear Emergency Exercise (INEX) series.

Organization

The NEA is governed by the Steering Committee for Nuclear Energy, the governing body of the NEA, which reports directly to the OECD Council. The Committee is composed of senior representatives of governments which are Members of the Agency. It oversees and shapes the work of the Agency to ensure its responsiveness to member countries' needs, notably in establishing the biennial programmes of work and budgets and approving the mandates of the Agency's seven standing technical committees. The standing technical committees are primarily composed of member country experts and technical specialists. These committees constitute a unique feature and important strength of the NEA, providing flexibility for adapting to new issues and helping to achieve consensus rapidly.

The Steering Committee for Nuclear Energy and the Agency's standing technical committees are serviced by the NEA secretariat. Responsibilities for the NEA's programme on nuclear emergency matters, including interfaces with the IACRNE, lie within the NEA's Radiation Protection and Radioactive Waste Management Division.

Capabilities and arrangements

The NEA's Committee on Radiation Protection and Public Health (CRPPH) established a standing Working Party on Nuclear Emergency Matters (WPNEM) to discuss current developments and future activities in the area of nuclear emergency management with NEA member countries and international organizations. The mission of the working party is to improve nuclear emergency management systems (planning, preparedness, response and recovery) within Member States and to share its knowledge and experience widely. Within this framework, the NEA:

- Provides a forum for experts in emergency response to share information and experience in all aspects of emergency management systems, identify emerging issues, and develop and test innovative ideas, approaches and concepts to facilitate international and national emergency management, beyond the context of the legal requirements of the Early Notification and Assistance Conventions;
- Addresses issues across the entire spectrum of nuclear and radiological emergency and recovery management, identifies gaps and provides recommended strategies to improve nuclear emergency management worldwide;
- Develops follow-up strategies, through workshops and expert group meetings, to address identified issues and to formulate new approaches for international testing;
- Participates, as appropriate, in the development, planning, preparation and organization of international nuclear emergency exercises, jointly sponsored by the IAEA, EC, WHO, WMO and any other interested international organization;
- Participates in the overall assessment and analysis of lessons identified from such exercises;
- Upon request of an NEA Member State, coordinates international peer reviews (information exchange meetings) of national level emergency management policies.

The WPNEM develops its programme of work based on identifying and analysing areas for improvement in emergency management systems, in coordination with Member States and other related organizations. With the mandate from the representatives of NEA member countries on CRPPH, the NEA:

- Provides a framework for validation of relevant products aimed at improving emergency management systems, developed under other coordinated activities;
- Identifies and investigates as appropriate further advancements in all aspects of emergency planning, preparedness, response and recovery concerning nuclear accidents and radiological emergencies;
- Provides input as appropriate for the development of international standards and recommendations on emergency management;
- Develops, coordinates and evaluates NEA objectives for inclusion in international exercises, such as those organized under the auspices of the IACRNE;
- Issues scientific reports, strategy documents, workshop proceedings and other products to broadly share information on advancements in emergency planning, preparedness and response.

The OECD NEA is a cosponsoring organization of the IAEA Safety Standards Series No. GSR Part 3 (Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards) and of the IAEA Safety Standards Series No. GSR Part 7 (Preparedness and Response for a Nuclear or Radiological Emergency). The NEA cosponsors the International Nuclear and Radiological Event Scale (INES), developed by the NEA and the IAEA in 1990 with the aim of communicating the safety significance of reported nuclear and radiological incidents and accidents. The NEA, with the IAEA and the World Association of Nuclear Operators (WANO), also cosponsors the Nuclear Events Web-based System (NEWS).

Finally, the NEA, through its Nuclear Law Committee, works on the interpretation, implementation, improvement and modernization of the international nuclear liability regime, primarily through a consideration of the:

- Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960[65] (Paris Convention);
- Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 (Brussels Convention Supplementary to the Paris Convention);
- Joint Protocol of 21 September 1988 relating to the Application of the Vienna Convention and the Paris Convention.

PAN AMERICAN HEALTH ORGANIZATION (PAHO)

Address

Routine Contact	Emergency Contact
Pan American Health Organization 525 23rd Street, NW Washington, DC 20037 USA http://www.paho.org	Emergency Operations Center Area of Emergency Preparedness and Disaster Relief For details, see the USIE address book

[65] As amended by the Additional Protocol of 28 January 1964, by the Protocol of 16 November 1982, and by the Protocol of 12 February 2004.

Responsibilities and Authorities

The Pan American Health Organization (PAHO) was founded in 1902 and enjoys international recognition as a specialized health agency of the Organization of the American States and as part of the United Nations system, serving since 1949 as the Regional Office for the Americas of the World Health Organization.

PAHO has more than 2000 staff members in its headquarters in Washington, D.C., its 27 country offices and its nine scientific centres, all working primarily with the countries of Latin America and the Caribbean in dealing with priority health issues.

According to the Constitution of PAHO, the governing bodies set the organization's mandates. For emergency preparedness and response and to formulate plans of action for various types of disasters, and in regard to radiation safety standards which address nuclear and radiological emergencies, the following resolutions were approved:

1980: "To assist the health sectors of Member Countries in the development of disaster preparedness programs also in case of natural or technological disasters of public health importance." (Res. *CD27.R40);*

1985: "To strengthen, if possible, the Organization's technical cooperation and coordination in preparing the health sector to respond effectively to health problems caused by technological disasters, such as explosions and chemical accidents, as well as by displacements of large population groups caused by natural or man-made disasters" (Res. *CD31.R23);*

1987: "To strengthen [member countries'] health emergency preparedness programs prior to a disaster by allocating the necessary personnel and budget, to the extent possible, according to the vulnerability of the country to natural disasters, chemical or nuclear accidents, or other emergency situations likely to affect the public health" (Res. *CD32.R10);*

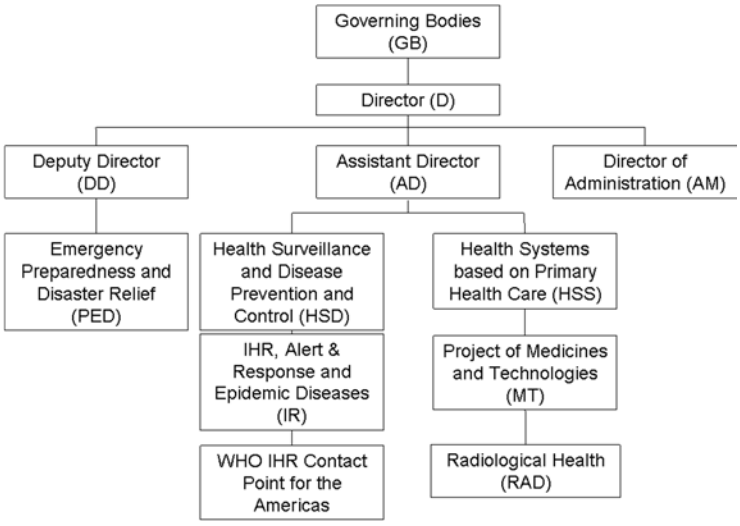
2007: "To urge Member States to: … (b) Strengthen the capacity of the IHR-NFP for intersectoral collaboration in both the dissemination of information and the consolidation of input from all relevant sectors" (Res. *CSP27.R13);*

2012: "1. To endorse the new standards *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards.* (Res. *CSP28.R15);*

"2. To urge Member States to draw upon the orientation that these standards give when they establish or update national rules or regulations and operating criteria in the area of radiation safety.

"3. To request the Director, in accordance with the availability of resources in the Organization, to continue to cooperate with the Member States in the development, adoption, and implementation of national radiation safety plans in accordance with the aforementioned international basic standards."

Organization



Capabilities and arrangements

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In the area of radiation emergencies, three programmes collaborate closely: Radiological Health (RAD), within the Project of Medicines and Technologies (HSS/MT); the Area of Emergency Preparedness and Disaster Relief (PED); and the Project of IHR, Alert and Response and Epidemic Diseases (HSD/IR).

PAHO initiated radiological health programmes in the 1950s. RAD currently has three lines of work: radiology services, radiation safety and radiological emergencies. PED has more than 25 years of experience in response to all types of disasters — natural, human-made and complex — to which the region of the Americas is vulnerable. HSD/IR houses the WHO IHR Contact Point for the 35 States Parties in the Americas.

Should a radiation emergency occur in the United States and Canada, PAHO's 38 Member States will perceive their role at the international level as purely informational. Should a radiation emergency occur in a Latin American or Caribbean country, the Ministries of Health are likely to request technical experts, while multisectoral disaster institutions, such as civil defence/protection, foreign affairs or others, may request support to coordinate the international response in the public health and medical fields. This technical cooperation will also be provided through consultation with WHO Collaborating Centres in the Americas.

PAHO's capacity related to radiation emergencies alert and response include the following:

- In compliance with IHR (2005) provisions related to the public health early warning and response functions, in its capacity of WHO IHR Contact for the Region of the Americas, PAHO contributes to the detection of public health risk/events associated with radiation hazards, health related risk assessment and information dissemination, including alerts, to national health authorities and health professionals through secure and public channels;
- PAHO can additionally contribute to response activities by supporting emergency coordination, health related need assessment and mobilization of a cadre of experts from among a wide variety of health related disciplines;
- PAHO can support its Member States in their health related recovery efforts following a radiation emergency.

Additional activities conducted and/or supported by PAHO related to prevention and preparedness for radiation emergencies include:

- Strengthening national radiation safety programmes;
- Provision of guidelines for the organization and development of imaging, and radiotherapy services;
- Strengthening national institutions to develop programmes for the planning, operation, maintenance and renovation of the physical and technological infrastructures;
- Promotion of legislation/regulations on the authorization of radiation sources and practices that represent potential exposures;
- Development of national policies on radioactive waste management;
- Calibration of radiation beams for diagnosis and treatment;
- Review of physical and clinical dosimetry;
- Location, characterization and conditioning of radioactive sources;
- Development and implementation of quality control and quality assurance programmes, including audits;
- Participation in and/or organization of radiological/nuclear simulation exercises;
- Facilitation of lessons learned exercises.

The lessons identified from actual disaster operations can be incorporated into high level training programmes, and these perishable data may be preserved in the form of publications and training materials in the Regional Disaster Information Centre.

The compilation of formal and informal literature regarding emergencies and radiological/nuclear accidents may be made available on the web site http://www.crid.or.cr/crid/ing/index_ing.html.

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

Address

Routine Contact	Emergency Contact
United Nations Development Programme One United Nations Plaza New York, NY 10017 USA http://www.undp.org	For details, see the USIE address book

Responsibilities and Authorities

UNDP is the UN's global development network, working in about 170 countries and territories to help eradicate poverty and reduce inequalities and exclusion. It supports countries in developing policies, leadership skills, partnering abilities and institutional capabilities, and in building resilience in order to sustain development results. UNDP coordinates all UN development activities at the country level as the manager of the Resident Coordinator system.

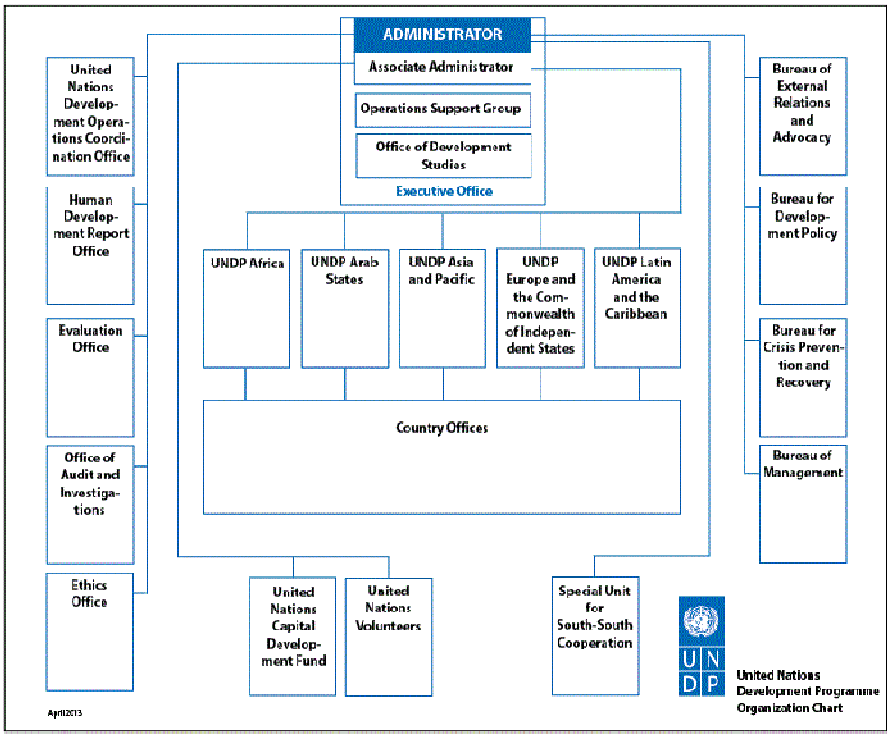
Crisis Prevention and Recovery is one of the five UNDP core practice areas. In 1998, the United Nations General Assembly decided to transfer to UNDP the responsibilities of the Emergency Relief Coordinator for operational activities for natural disaster mitigation, prevention and preparedness. UNDP helps more than 80 countries work in crisis prevention and recovery, prevent armed conflict, alleviate the

effects of natural disasters and allow local people to rebuild critical infrastructure following disaster. UNDP supports disaster-prone countries in the development of legislative frameworks, operational systems and coordination mechanisms to ensure the integration of risk reduction into human development and help countries prone to recurring shocks and stresses to transform from a state of fragility to greater resilience. UNDP is a member of Inter-Agency Standing Committee (IASC), the primary mechanism for interagency coordination of humanitarian assistance; the Inter-Agency Group and the Joint Initiative on Recovery Coordination, which is aimed at coordinating arrangements for the transition and recovery phase from relief to development. In close coordination with the Secretariat of the United Nations Office for Disaster Risk Reduction (UNISDR), UNDP assisted in the implementation of the Hyogo Framework for Action (2005–2015), a ten year plan to make the world safer from natural hazards.

In 2004, UNDP was designated by the UN Secretary-General as the lead agency for coordination of UN wide efforts on issues related to Chernobyl. The UNDP Administrator is the UN Coordinator of International Cooperation on Chernobyl and chairs the Inter-Agency Task Force on Chernobyl. UNDP monitors the implementation of the UN Action Plan on Chernobyl until 2016 and implements programmes aimed at the recovery and development of communities affected by the Chernobyl accident. UNDP also works with communities affected by nuclear tests in Semipalatinsk (Kazakhstan) and the international initiative aimed at structuring the uranium tailings remediation projects in Central Asia. These experiences have illustrated how devastating the human consequences of nuclear emergencies can be. Deep rooted and long lasting, they include, in particular, stigma and fear, leading to a "victim mentality" and a culture of dependency in the affected areas.

Organization

The following diagram illustrates the organization of the UNDP.



Capabilities and arrangements

As part of UNDP, the Bureau for Crisis Prevention and Recovery (BCPR) was established in 2007 to support innovative approaches to crisis prevention, early

warning and conflict resolution, as well as to help bridge the gap between emergency relief and long term development. It comprises three clusters dealing with strategy and policy, programmes and operations, and technical advisory services. The technical advisory services cluster includes a 16-person Disaster Reduction and Recovery Team.

UNDP is at the heart of Chernobyl related work at the UN system level. To support the UNDP Administrator in the UN wide function on Chernobyl, an Office of Coordination of International Cooperation on Chernobyl is hosted by the UNDP Regional Bureau for Europe and the CIS.

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

Address

Routine Contact

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http://www.unep.org

Emergency Contact

Joint UNEP/OCHA Environment Unit /Environmental Emergencies Section
Emergency Services Branch

For details, see the USIE address book

B

Responsibilities and authorities

The Joint UNEP/OCHA Environment Unit is a partnership between the United Nations Environment Programme (UNEP) and the UN Office for the Coordination of Humanitarian Affairs (OCHA) that serves as the integrated United Nations emergency response mechanism to activate and provide international assistance to countries facing environmental emergencies.

The role of the Joint Environment Unit is to rapidly mobilize and coordinate emergency assistance and response resources to countries facing environmental emergencies and natural disasters with significant environmental impacts.

In addition, UNEP makes arrangements for the Vienna based secretariat of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR).

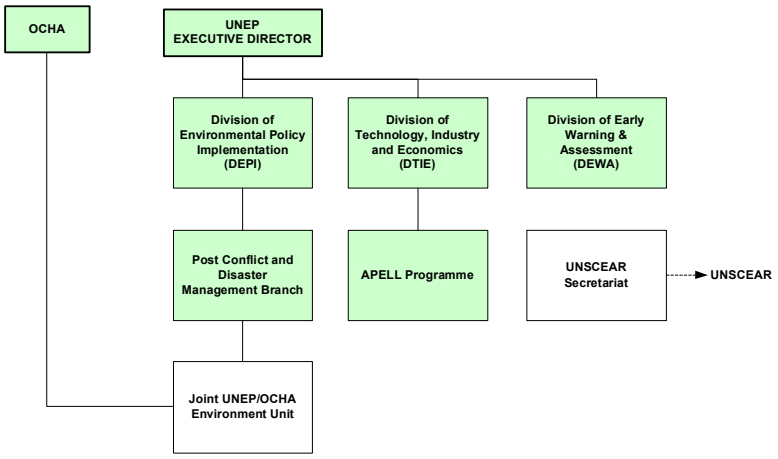
UNEP is the leading global environmental authority and promotes the coherent implementation of the environmental dimension of sustainable development within the UN. The programme is based in Nairobi, Kenya, and works through its divisions and regional, liaison and thematic offices around the world. UNEP's governing body f (the United Nations Environment Assembly — UNEA) identified the increasing number of environmental emergencies as one of the environmental threats that needed to be addressed and emphasized the important role the programme played globally in the areas of emergency prevention, preparedness, assessment, mitigation and response. UNEP has developed a strategic framework on emergency prevention, preparedness, assessment, mitigation and response, including an agenda for action which serves as a basis for the development and the implementation of programmes on disaster reduction at the global, regional, sub-regional and national levels.

The focus of UNEP's work in environmental emergencies is, therefore, to influence and assist countries through assessments, technical assistance, advisory services,

production of tools and products and networking. It also supports pilot projects for better prevention of, preparedness for, and response to environmental emergencies and/or disasters with impacts on the environment to ensure that the environmental aspects of emergencies are clearly understood and addressed as an integral part of overall disaster management imperatives, including prevention, preparedness, response and mitigation, and that these are fully recognized as critical to human and environmental security.

Organization

The following diagram illustrates the organization of the UNEP.



Capabilities and arrangements

The Joint UNEP/OCHA Environment Unit has a number of key functions that it undertakes to ensure a timely and coordinated response to emergencies.

- Monitor — Continuous monitoring and ongoing communication with an international network of contacts and permanent monitoring of news services and web sites, for early notification of environmental occurrences.
- Notification — When disaster strikes, the unit promptly alerts the international community and issues Information and Situation Reports to a comprehensive list of worldwide contacts.
- Brokerage —— The unit can quickly bring the affected country in direct contact with donor governments around the world that are ready and willing to assist and provide needed response resources.
- Information Clearing House — The unit serves as an effective focal point to ensure that available information on chemicals, maps and satellite images from donor sources and institutions is channelled directly to the relevant authority in the affected country.
- Mobilization of Assistance — The unit is able to mobilize multilateral assistance from the international donor community when requested by countries affected by environmental emergencies or natural disasters with significant environmental implications.
- Assessment — The unit can arrange for the urgent dispatch of international experts and equipment to assess the impacts of an emergency and to make impartial and independent recommendations about response, clean-up, remediation and rehabilitation.

The unit is available 24 hours a day, 7 days a week, year-round to mobilize assistance for pending emergencies. To facilitate the process, the unit has developed the Environmental Emergency Notification/Request for International Assistance form.

The form is available in English, French, Spanish, Russian, Chinese and Arabic through the unit and on the unit's web site at www.unocha.org/unep.

UNEP contributes its environmental expertise to the efforts of the international community in the field of environmental emergencies. After the initial emergency response phase, handled via the Joint Environment Unit, UNEP can, through its Post Conflict and Disaster Management Branch (PCDMB) deploy multi-disciplinary teams to the field to undertake comprehensive environmental monitoring and risk assessment. In situations where the assessment reveals an ongoing environmental risk, UNEP can mobilize additional international assistance to address the same.

In addition to PCDMB, a number of institutional structures exist within UNEP for this endeavour.

The Division of Early Warning and Assessment (DEWA) plays a role in environmental emergencies, since, through its assessments, it generates data and information which can be used to support the contingency planning processes and in the development of preparedness strategies. The Division also acts as the principal counterpart for the Secretariat of UNSCEAR.

The Awareness and Preparedness for Emergencies at Local Level programme (APELL) within the Division of Technology, Industry and Environment (DTIE) is a tool for raising awareness and improving the preparedness of communities exposed to environmental emergencies. The programme addresses all environmental emergencies related to industrial activities with potential for fire, explosion or toxic release but is also relevant to natural disaster preparedness. Such environmental emergencies can result from human activity or as consequences of natural disasters such as earthquakes and flooding. APELL consists of two parts: providing information to the community to allow it to understand local risks; and putting together an overall coordinated response plan to protect people, property and the environment. It has been successfully used to improve coordination of emergency response services locally and in cross-border hazard situations. APELL has already been introduced in more than 30 countries, and its successful implementation through country seminars/workshops and national APELL centres results in a better level of preparedness by local emergency services and an understanding by local people of how to react to an emergency in their neighbourhood.

Within the context of the Regional Seas Programme, Regional Activity Centres (RACs) are also responsible for backstopping administratively and technically the protocols dealing with cooperation in cases of emergency from maritime related activities when these protocols exist.

UNEP's six regional offices play a role in environmental emergencies through the implementation at regional/sub-regional levels of UNEP's global programme and, in so doing, support the work on environmental emergencies. Some of these regional offices have a dedicated staff that is responsible for the implementation of UNEP's disasters and conflict sub-programme.

UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS (OCHA)

Address

Routine Contact

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Tel: +41 (0) 22 917 1234
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OCHA New York
United Nations Secretariat,
New York, NY 10017
USA
Tel: +1 (212) 963 1234
Email: ochany@un.org
http://www.unocha.org/unep

Emergency Contact

Emergency Services Branch

For details, see the USIE address book

Responsibilities and authorities

The Office for the Coordination of Humanitarian Affairs (OCHA) is part of the United Nations Secretariat and is headed by the Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator (ERC), who has the mandate to bring together humanitarian actors to ensure a coherent response to emergencies. OCHA also ensures that there is a framework within which each actor can contribute to the overall response effort. OCHA's mission is to:

- Mobilize and coordinate effective and principled humanitarian action in partnership with national and international actors in order to alleviate human suffering in disasters and emergencies;
- Advocate the rights of people in need;
- Promote preparedness and prevention;
- Facilitate sustainable solutions.

The Emergency Relief Coordinator, under the aegis of the General Assembly and working under the direction of the Secretary-General, has the following responsibilities[66]:

- Processing requests from affected Member States for emergency assistance requiring a coordinated response;
- Maintaining an overview of all emergencies through the systematic pooling and analysis of early warning information;
- Organizing, in consultation with the government of the affected country, a joint interagency needs assessment mission and preparing a consolidated appeal to be issued by the Secretary-General;

[66] General Assembly Resolution A/RES/46/182, 1992, on Strengthening of the Coordination of Humanitarian Emergency Assistance of the United Nations.

- Actively facilitating, through negotiation if needed, access by operational organizations to emergency areas for the rapid provision of emergency assistance through modalities such as the establishment of temporary relief corridors;
- Managing, in consultations with the operational organizations concerned, the central emergency response fund and assisting in the mobilization of resources;
- Serving as a focal point with governments and intergovernmental and non-governmental organizations concerning United Nations emergency relief operations and, when appropriate and necessary, mobilizing their emergency relief capacities, including through consultations in the capacity as Chairman of the Inter-Agency Standing Committee (IASC);
- Actively promoting, in close collaboration with concerned organizations, the smooth transition from relief to rehabilitation and reconstruction as relief operations under their aegis are phased out;
- Providing consolidated information on emergencies, to all interested governments and concerned authorities drawing on the capacities of the organizations of the system and other available sources.

OCHA has a Memorandum of Understanding with the IAEA[67], which encompasses: the specific responsibilities of OCHA and the IAEA in a radiation emergency; disaster related activities in respect of which OCHA and the IAEA will cooperate; requests for disaster relief assistance; joint action in the field and missions to disaster areas; exchange of information; confidential information; and financial arrangements. In particular, it recognizes that OCHA assumes the role of an overall coordinator of all aspects of disaster relief assistance, and that the IAEA has operational responsibilities for coordinating relevant technical and scientific assistance following a radiation accident. On request, the IAEA will advise OCHA of any special precautions or preparations to be taken or made by relief personnel. In a disaster situation following a radiation accident, the IAEA will arrange for members of its staff to join any United Nations Disaster Assessment and Coordination (UNDAC) team, deployed from the OCHA Emergency Services Branch, and to be responsible for the assessment of relevant technical and scientific requirements. OCHA will, at its discretion, send representatives to the disaster area for on the spot assessment of emergency relief requirements other than those of a technical or scientific nature. OCHA will also provide communications expertise in the event of a disaster or complex emergency.

International relief assistance supplements national efforts to improve the capacities of developing countries to mitigate the effects of natural disasters expeditiously and effectively and to cope efficiently with all emergencies. The United Nations is charged with assisting developing countries to strengthen their capacity to respond to disasters, at the national and regional levels, as appropriate. In the disaster preparedness activities of OCHA, technical cooperation missions are sent to countries vulnerable to natural disasters to give advice to the government on the establishment or improvement of disaster relief machinery, the formulation of emergency plans, the training of personnel and other measures which should be taken in advance of a disaster.[68] The

[67] Memorandum of Understanding between the Director General of the International Atomic Energy Agency and the United Nations Disaster Relief Co-ordinator, 1977.

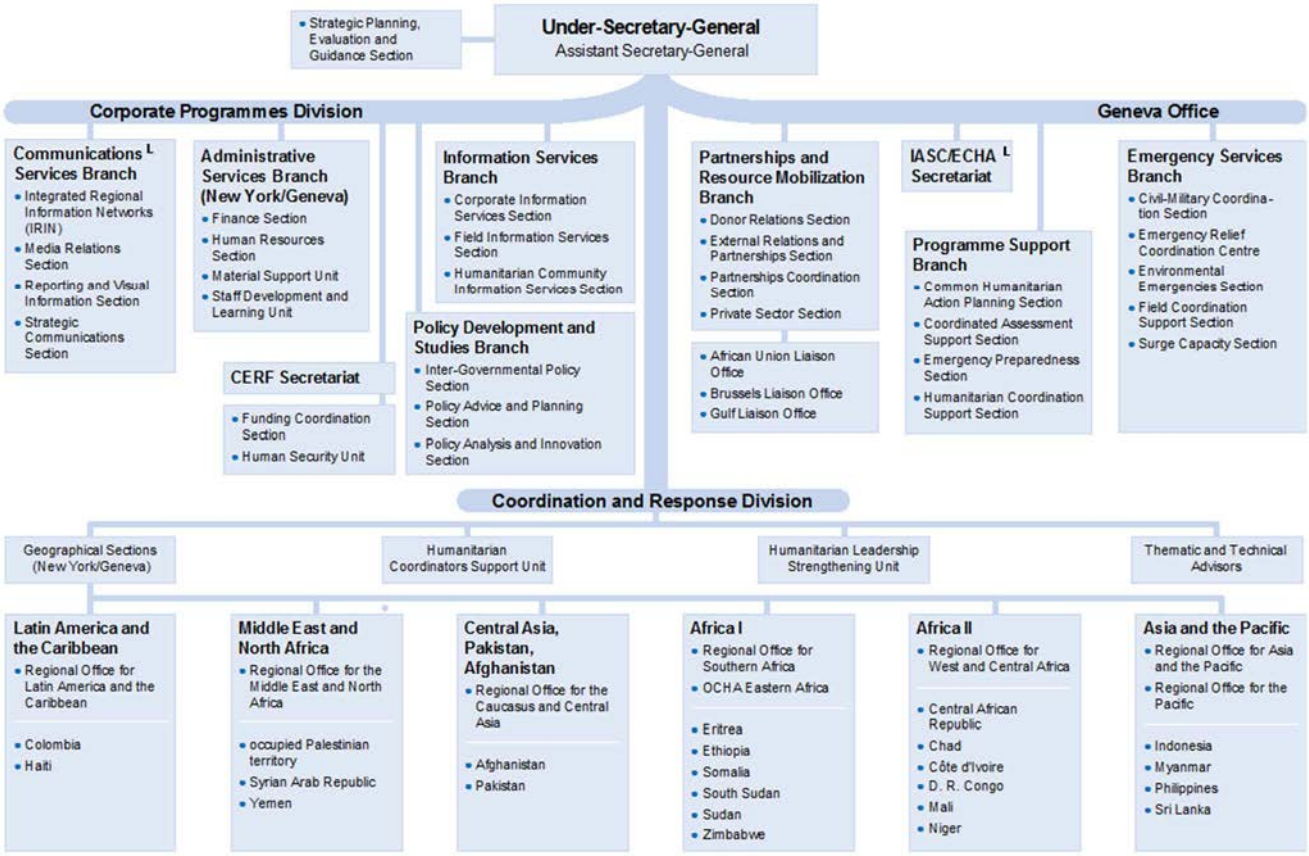
[68] General Assembly Resolution A/RES/46/182, 1992, on Strengthening of the Coordination of Humanitarian Emergency Assistance of the United Nations.

Memorandum of Understanding[69] with the IAEA recognizes that the IAEA will provide, upon request from the government of a country or from OCHA, advice on the special precautions that should be taken into account in formulating emergency plans necessary for dealing with any radiation accident that may occur.

On the basis of existing mandates and drawing upon monitoring arrangements available within the system, the United Nations is charged with building upon the existing capacities of relevant organizations and entities of the United Nations, for the systematic pooling, analysis and dissemination of early warning information on natural disasters and other emergencies. As a matter of OCHA policy, early warning information should be made available in an unrestricted and timely manner to all interested governments and concerned authorities.

Organization

The following diagram illustrates the organizational structure of OCHA.



Capabilities and arrangements

When a major emergency or disaster occurs, OCHA consults with the United Nations Resident Coordinator/Humanitarian Coordinator (RC/HC) in the country or countries concerned and undertakes interagency consultation at headquarters to reach agreement on the main humanitarian priorities for action. OCHA then provides support for the coordination of activities within the country, if necessary. It also assists in resource mobilization by launching international appeals and by monitoring progress of relief efforts, if so requested.

[69] Memorandum of Understanding between the Director General of the International Atomic Energy Agency and the United Nations Disaster Relief Co-ordinator, 1977.

The Under-Secretary-General for Humanitarian Affairs, in his capacity as ERC, is responsible for the coordination among humanitarian entities and serves as the principal humanitarian advocate in the UN system. The ERC achieves this mainly through his/her chairing of the Executive Committee on Humanitarian Affairs (ECHA), which comprises UN entities, and the Inter-Agency Standing Committee (IASC), which brings together all major humanitarian actors, both within (ECHA members) and outside the UN system (such as NGOs and the Red Cross/Red Crescent Movement). The IASC works to develop a shared analysis of a given crisis and to ensure interagency decision making on the response to complex emergencies and on the development of humanitarian policies and appropriate advocacy.

The OCHA Emergency Services Branch (ESB), in close cooperation with the Coordination and Response Division (CRD), is the focal point within OCHA for mobilizing and coordinating international disaster response. It can be contacted on a 24-hour basis in an emergency, when OCHA:

- Alerts and mobilizes the international community, in particular emergency relief services of donor governments, the United Nations system, intergovernmental and non-governmental organizations; can organize and lead a United Nations interagency mission to the disaster affected area to carry out a multisectoral assessment of the effects of an emergency to ensure coordinated planning and the formulation of an overall UN response, if so requested;
- When the situation warrants, and subject to the availability of funds, will provide an emergency cash grant through the Office of the United Nations Resident Representative/Coordinator (RC/HC), if the government launches an international appeal for assistance immediately after the occurrence of the disaster;
- Is ready to act as an expeditious channel for donor contributions, relying on simple and quick administrative procedures;
- May deploy to a sudden-onset emergency, at the request of the affected government or RC/HC, the United Nations Disaster Assessment and Coordination (UNDAC) team and Hazmat technical modules with experts who can arrive in the country within 48 hours and work closely with the affected government and assist with assessments, communication, coordination of incoming international humanitarian assistance and analysis and dissemination of humanitarian information to the international community; in addition, may deploy staff via its Emergency Response Roster (ERR) or technical experts via its Stand-By Partnership Programme (SBPP);
- The Hazmat team is equipped with intensimeters, dosimeters and sampling equipment for initial hazard zoning and ensuring that the United Nations On-Site Operations Coordination Centre (OSOCC) is operating in a safe environment and to alert international responders should they be on-site through the virtual OSOCC, OCHA's real time information sharing portal (http://vosocc.unocha.org/), as the situation changes.
- Alerts and coordinates urban search and rescue (SAR) teams from different countries when the situation warrants it;
- Can assist in the establishment of an on-site operations coordination centre, which has the dual purpose of providing the local emergency management authority of an affected country with a system for coordinating the operational activities of international relief agencies, and of providing a framework for cooperation and coordination among international relief teams at a disaster site;

- Can assist, on request, in mobilizing and coordinating a specialized environmental emergency assistance;
- Can assist in establishing and coordinating secure and reliable telecommunications during the emergency response phase;
- Can assist in identifying needs for and accessing technical and logistics resources in support of field coordination;
- Carries out communications functions in public information and reporting, and assists in aligning messaging;
- Can advise States on the deployment and use of foreign Military and Civil Defence Assets (MCDA), which include specialized personnel and equipment required for disaster relief operations (e.g. aircraft, helicopters, ships, nuclear decontamination facilities, field hospitals, water purification units).

UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS (UNOOSA)

Address

Routine Contact	Emergency Contact
United Nations Office for Outer Space Affairs Vienna International Centre P.O. Box 500 1400 Vienna, Austria Tel. +43 (1) 26060-4950 Fax +43 (1) 26060-5830 Email: oosa@unvienna.org (General) soregister@unoosa.org (Space objects related) http://www.unoosa.org/	For details, see the USIE address book

Responsibilities and authorities

The Office for Outer Space Affairs (UNOOSA) is part of the United Nations Secretariat and is responsible for servicing the United Nations Committee on the Peaceful Uses of Outer Space, the General Assembly's only standing committee that deals exclusively with the peaceful uses of outer space. The office is also responsible for promoting the use and application of space based technology and is mandated by the General Assembly to assist in the development of national and regional indigenous space application capabilities, in support of sustainable development and disaster management. The office serves as the secretariat for the United Nations Inter-Agency Meeting on Outer Space Activities, a mechanism established within the United Nations system to coordinate space related activities of UN entities.

The office provides technical legal assistance to States in the development of national legislation relating to the conduct and regulation of space activities.

The office is responsible for discharging the duties, responsibilities and obligations of the Secretary-General of the United Nations relating to outer space activities, as specified in international legal instruments[70]. These responsibilities involve the timely

[70] Those relevant to nuclear powered satellites and their re-entry are: Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Resolution 2222 (XXI) of 1967); Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (Resolution 2345 (XXII) of 1968); Convention on

and effective dissemination of information relating to outer space activities provided by States and international organizations, in particular those that involve the launch, operation, re-entry and possible recovery of space objects (i.e. satellite, probes, manned spacecraft as well as non-functional objects such as spent rocket stages). Of these, the primary responsibility is the maintenance of the United Nations Register of Objects Launched into Outer Space, established under the 1976 Convention on Registration of Objects Launched into Outer Space. The Register is a treaty based mechanism that identifies the State responsible for — and potentially liable in case of damage caused by — a particular space object.

In the specific case of nuclear powered satellites, and in addition to information provided under the Registration Convention, the 1992 Principles Relevant to the Use of Nuclear Power Sources in Outer Space, stipulate that:

- Any State launching a space object with nuclear power sources on board shall, prior to the launch, ensure that a thorough and comprehensive safety assessment is conducted. This safety assessment shall cover all relevant phases of the mission and shall deal with all systems involved, including the means of launching, the space platform, the nuclear power source and its equipment and the means of control and communication between ground and space. The results of the safety assessment shall be made publicly available prior to each launch, and the Secretary-General of the United Nations shall be informed on how States may obtain such results of the safety assessment as soon as possible prior to each launch.
- Any State launching a space object with nuclear power sources on board shall, in a timely fashion, inform States concerned and the Secretary-General of the United Nations in the event that this space object is malfunctioning with a risk of re-entry of radioactive materials to the Earth. Such notifications shall include information on the space object's system parameters (including the name of launching State or States and address of the authorities which may be contacted for additional information or assistance in case of accident; international designation; date and territory or location of launch; information required for the best prediction of orbit lifetime, trajectory and impact region; and general function of spacecraft) and the radiological risk of nuclear power source(s) (including the type of nuclear power source — radioisotopic/reactor; and the probable physical form, amount and general radiological characteristics of the fuel and contaminated/activated components likely to reach the ground).
- Information provided in the case of a risk of re-entry of radioactive materials to the Earth shall be updated as frequently as practicable, with the frequency of dissemination of the updated information increasing as the anticipated time of re-entry into the dense layers of the Earth's atmosphere approaches so that the international community will be informed of the situation and will have sufficient time to plan for any national response activities deemed necessary.
- Upon notification of an expected re-entry into the Earth's atmosphere of a space object containing a nuclear power source on board and its components, all States possessing space monitoring and tracking facilities, in the spirit of

International Liability for Damage Caused by Space Objects (Resolution 2777 (XXVI) of 1972); Convention on Registration of Objects Launched into Outer Space (Resolution 3235 (XXIX) of 1975); and the Principles Relevant to the Use of Nuclear Power Sources in Outer Space (Resolution 47/68 of 1992).

international cooperation, shall communicate the relevant information that they may have available on the malfunctioning space object with a nuclear power source on board to the Secretary-General of the United Nations and the State concerned as promptly as possible in order to allow States that might be affected to assess the situation and take any precautionary measures deemed necessary.

Organization

The professional staff of the office consists of both scientifically and legally trained personnel with particular focus and specialization on matters pertaining to space related activity, which would be available to provide background and technical assistance upon request.

Capabilities and arrangements

As required under its obligations to maintain the United Nations Register of Objects Launched into Outer Space and implement the other requirements of outer space treaties, the office maintains expertise to validate technical information provided by States when registering their space objects in conformity with the Registration Convention. The Office maintains technical expertise in astronautics, spacecraft design, engineering, satellite tracking and space law. The office is also kept apprised of changes to space object population (such as collisions or in-orbit breakups) and their negative impact on the Earth's satellite population (including nuclear powered satellites).

The Office provides a dedicated 24/7 capability for assistance to States in the identification of space objects recovered within their territory. This resource is also made available to the Incident and Emergency Centre of the IAEA for emergency and routine enquiries.

As part of its duties under the Joint Plan, the office provides pre-launch notification to the IEC on nuclear powered space objects and other space that may be of concern to States (such as lunar planetary probes or other deep space missions). It also provides the IEC with technical information on the decay of space objects, its assessment of any radiological risks and the survivability of the objects' components. The office responds to requests for information by organizations within the United Nations system, States and the media on high profile space related topics. If necessary, it also can draw upon technical, policy and media resources of the United Nations Headquarters as well as the United Nations Office at Vienna.

The office also maintains a network of national focal points on space objects and also maintains close contact with technical and legal experts and policy makers in national space agencies and governments. If required, the office can request assistance from those States which have space surveillance capabilities to support activities related to the Joint Plan.

WORLD HEALTH ORGANIZATION (WHO)

Address

Routine Contact	Emergency Contact
World Health Organization 20, Avenue Appia 1211 Geneva Switzerland http://www.who.int/ionizing_radiation http://www.who.int/ihr http://www.who.int	For details, see the USIE address book

Responsibilities and authorities

The World Health Organization (WHO), under its Constitution, has the statutory general responsibilities relevant to emergency response[71]:

- Act as the directing and coordinating authority on international health work;
- Furnish appropriate technical assistance and, in emergencies, necessary aid upon the request or acceptance of governments;
- Establish and maintain effective collaboration with the United Nations, specialized agencies, governmental health administrations, professional groups and such other organizations as may be deemed appropriate;
- Assist governments, upon request, in strengthening health services;
- Promote, in cooperation with other international agencies where necessary, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions and other aspects of environmental hygiene;
- Study and report on, in cooperation with other international agencies where necessary, administrative and social techniques affecting public health and medical care from a preventive and curative point of view, including hospital services and social security;
- Provide information, counsel and assistance in the field of health;
- Assist in developing an informed public opinion worldwide on matters of health.

The WHO Secretariat, through the Department of Global Capacity, Alert and Response and other programmes, is also actively supporting and monitoring public health capacity building activities by the IHR States Parties. Under the IHR (2005),[72] all 196 States Parties are required to develop and maintain a broad range of core public health capacities for surveillance and response, including specifically public health event and emergency preparedness (with relevant public health emergency response plans), both generally throughout the national territory and at designated international ports, airports and ground crossings. Consistent with the broad scope of the IHR (2005), these requirements apply to public health risks of radiation, as well as those of biological or chemical origin.

Under the IHR (2005), all States Parties are required to have National IHR Focal Points, which are available at all times for IHR related communications with WHO, including public health emergencies. These National IHR Focal Points are required to have established contacts or links with all relevant governmental sectors which may be

[71] Constitution of the World Health Organization, Chapter II — Functions, Article 2.
[72] WORLD HEALTH ORGANIZATION, International Health Regulations (2005), 2nd ed., WHO, Geneva (2008), available at: http://www.who.int/ihr/IHR_2005_en.pdf

involved in a public health emergency; these should also include the national radiation related authorities (as well as food safety, chemical safety, transportation, agriculture and other sectors) to ensure appropriate coordination during a public health emergency or event.

Technical tools and guidance supporting the development of these capacities (including those relating to radiation risks) are made available by relevant WHO technical programmes, including the Radiation Programme of the Interventions for Healthy Environment Unit (Department of Public Health and Environment, Health Security and Environment Cluster) and at the six regional offices of WHO. Training courses, workshops and technical meetings take place in all regions to support national capacity building. All States Parties were required to complete an assessment of their existing national core capacities and resources needed to meet the IHR core capacity requirements. All of these core surveillance and response capacities, including those relating to radionuclear risks, were required to be in place by June 2012 unless an extension was granted.

The WHO is a full party to the Early Notification and Assistance Conventions and, as such, is competent to act as the directing and coordinating authority in international public health matters covered by the conventions and to provide related assistance upon the request or acceptance of governments, without prejudice to the national competence of each of its Member States.

With regard to its obligations as a Party to the Assistance Convention, the WHO:

- Cooperates to facilitate prompt assistance in the event of a nuclear accident or radiological emergency to minimize its consequences and to protect life from the effects of radioactive releases.
- May agree on bilateral or multilateral arrangements or, where appropriate, a combination of these, for preventing or minimizing injury and damage which may result in the event of a nuclear accident or radiological emergency.
- Shall promptly decide and notify a requesting State Party, directly or through the IAEA, whether it is in a position to render the assistance requested, and if so, the scope and terms of the assistance that it might render.
- Shall, within the limits of its capabilities, identify and notify the IAEA of experts, equipment and materials which could be made available for the provision of assistance to other States Parties in the event of a nuclear accident or radiological emergency as well as the terms, especially financial, under which such assistance could be provided.
- Should, where the assistance involves personnel, designate in consultation with the requesting State, the person who should be in charge of and retain immediate operational supervision over the personnel and the equipment provided by it. The designated person should exercise such supervision in cooperation with the appropriate authorities of the requesting State.
- Shall make known to the IAEA and to other States Parties, directly or through the IAEA, its competent authorities and point of contact authorized to make and receive requests for and to accept offers of assistance. Such points of contact shall be available continuously, and the IAEA shall promptly be informed of any changes in the information.
- Shall protect the confidentiality of any confidential information that becomes available in connection with the assistance in the event of a nuclear accident or radiological emergency.

- Shall make every effort to coordinate with the requesting State before releasing information to the public on the assistance provided in connection with a nuclear accident or radiological emergency.

The WHO has statutory responsibilities with regard to preparedness and response to radiological or nuclear emergencies. On 18 May 2002, the World Health Assembly adopted resolution WHA55.16, Global Public Health Response to Natural Occurrence, Accidental Release or Deliberate use of Biological and Chemical Agents or Radionuclear Material That Affect Health. This resolution recognized that one of the most effective methods of preparing for deliberately caused disease is to strengthen public health surveillance and response activities for naturally or accidentally occurring diseases. Among other determinations, the World Health Assembly resolved that it:

- "URGES Member States:
  (1) to ensure they have in place national disease-surveillance plans which are complementary to regional and global disease-surveillance mechanisms, and to collaborate in the rapid analysis and sharing of surveillance data of international humanitarian concern;
  (2) to collaborate and provide mutual support in order to enhance national capacity in field epidemiology, laboratory diagnoses, toxicology and case management;
  (3) to treat any deliberate use of…biological and chemical agents and radionuclear attack …also as a global public health threat, and to respond to such a threat in other countries by sharing expertise, supplies and resources in order rapidly to contain the event and mitigate its effects;

- "REQUESTS the Director-General:
  (1) to continue, in consultation with relevant intergovernmental agencies and other international organizations, to strengthen global surveillance… and related activities such as revision of the International Health Regulations and development of WHO's food safety strategy, by coordinating information gathering on potential health risks and disease outbreaks, data verification, analysis and dissemination, by providing support to laboratory networks, and by making a strong contribution to any international humanitarian response, as required;
  (2) to provide tools and support for Member States, particularly developing countries, in strengthening their national health systems, notably with regard to emergency preparedness and response plans, including disease surveillance and toxicology, risk communication, and psychosocial consequences of emergencies;
  (3) to continue to issue international guidance and technical information on recommended public health measures to deal with the deliberate use of biological and chemical agents to cause harm, and to make this information available on WHO's web site;
  (4) to examine the possible development of new tools, within the mandate of WHO, including modelling of possible scenarios of …accidental release or deliberate use of …radionuclear material …and collective mechanisms concerning the global public health response".

In addition, on 27 May 2006, the World Health Assembly adopted WHA59.22 on Emergency Preparedness and Response, which:

- "REQUESTS Member States to further strengthen national emergency mitigation, preparedness, response and recovery programmes through, as appropriate, legislative, planning, technical, financial and logistical measures, with a special focus on building health systems and community resilience;

- URGES Member States to provide support to affected countries and to WHO so that it may address immediately, within its mandate, humanitarian health crises;
- REQUESTS the Director-General, to take the necessary steps:

  (1) to provide the necessary technical guidance and support to Member States for building their health-sector emergency preparedness and response programmes at national and local levels, including a focus on strengthening community preparedness and resilience;

  .....

  (3) to work to ensure that WHO, within its mandate, is able to respond effectively to emergencies and crises and, in doing so, continues to work closely with other organizations of the United Nations system … and other relevant international organizations and mechanisms;
- REQUESTS the Director-General in particular:

  (1) to explore and implement measures to enhance WHO participation in the overall humanitarian response through existing mechanisms such as the Central Emergency Response Fund, International Search and Rescue Advisory Group, or the United Nations Disaster Assessment and Coordination team;

  (2) to compile a global database of authoritative technical health references in order to facilitate health-sector response to emergencies and crises;

  (3) to establish and maintain, in collaboration with relevant organizations of the United Nations system and other partners, a tracking service that will monitor and assess mortality rates in humanitarian emergencies;

  (4) to take part in United Nations system-wide mechanisms for logistics and supply management that would assure immediate mobilization of vital supplies in emergencies and crises".

The IHR (2005) were adopted by the World Health Assembly on 23 May 2005 and entered into force on 15 June 2007;[73] they are binding upon 196 States Parties (including all 194 WHO Member States). They were negotiated and adopted by the WHO Member States to establish a global legal framework against the international spread of disease, including coordinated response to potential international public health emergencies and public health risks, involving virtually all serious public health risks which could be transmitted across borders. In light of their comprehensive purpose and scope, and the expansive definitions of 'disease', 'event', 'public health risk'[74] and other relevant terms, the IHR (2005) are very broad in their application, and also include risks and events of radiological origin. However, not all events involving radiation present the risks to public health that would trigger some of the provisions in the IHR.

Under the IHR (2005), WHO has mandates and obligations to:

- Receive notifications and reports from all States Parties concerning public health events (including emergencies) and other public health risks of potential international concern;

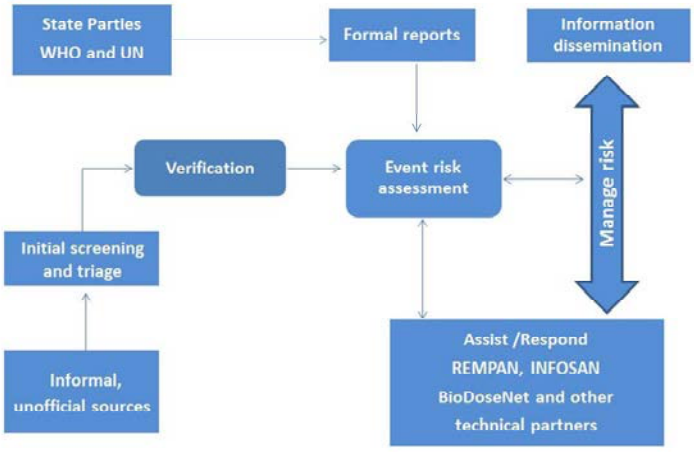
[73] WORLD HEALTH ORGANIZATION, International Health Regulations (2005), 2nd ed., WHO, Geneva (2008), available at: http://www.who.int/ihr/IHR_2005_en.pdf.

[74] The IHR (2005) definitions of 'disease', 'event' and 'public health risk' are as follows: 'disease' means an illness or medical condition, irrespective of origin or source, that presents or could present significant harm to humans; 'event' means a manifestation of disease or an occurrence that creates a potential for disease; 'public health risk' means a likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger (IHR (2005), Art. 1.1).

- Seek verification of unofficial reports of all public health events which may constitute a *public health emergency of international concern*, to which States Parties are obligated to respond with all applicable public health information to WHO;
- Collaborate with and support States Parties in assessing and responding to public health risks and events, including technical guidance and assistance, assessing the effectiveness of control measures and where appropriate the mobilization of international teams of experts;
- Conduct public health surveillances globally, assess their potential to cause international disease spread and interference with international traffic;
- Disseminate information on relevant public health events (including emergencies) and risks to States Parties and relevant international organizations;
- Determine (by the Director General) whether a *public health emergency of international concern* is occurring, and if so, determine when it has terminated, as well as issue 'temporary recommendations' to States Parties and others of appropriate responsive health measures according to specified procedures, including advice by an IHR Emergency Committee of experts;
- Coordinate and cooperate in its activities implementing the IHR, as appropriate, with other competent intergovernmental organizations and international bodies, including the United Nations, FAO, IAEA, ICAO, IMO and others in order to ensure adequate protection for public health.

Organization

Overall responsibility for WHO preparedness and response to nuclear or radiological emergencies, liaison and coordination with other relevant international organizations and other stakeholders, updating the WHO standard operating procedures for response to nuclear or radiological emergencies and coordination and maintenance of specialized expert networks lies with the Department of Public Health and Environment (PHE), Health Security and Environment Cluster (HSE), World Health Organization Headquarters, Geneva. Issues pertaining to food monitoring and safety are addressed by the Department of Food Safety (FOS, HSE). The following diagram illustrates the organization of WHO for response to radiological and nuclear emergencies.



Capabilities and arrangements

The resources in the World Health Organization are as follows:

- Public health events (including emergencies) and risks (including those involving radiation or related health risks) are subject to reporting, assessment, coordination and other response related requirements and mechanisms

stipulated in the IHR (2005) and the related technical and IHR administrative resources at WHO Headquarters and the regional offices.

- WHO Headquarters response to a public health emergency event, regardless of its nature, is managed from the Strategic Health Operations Centre (SHOC) with the technical support provided by the staff of specialized technical programs. SHOC offers state of the art technology for emergency communications and information sharing.
- As of April 2013, the Radiation Team (RAD) of the Interventions for Health Environment Programme (IHE) of the Department of Public Health and Environment (PHE) is a key technical unit of the WHO in the area of nuclear or radiological emergency response; in this capacity, RAD provides technical support to the regional and country offices of WHO. RAD is the focal point for the IAEA's Incident and Emergency Centre and IACRNE for maintaining and mobilizing the international response arrangements.
- Coordinated by RAD, the Radiation Emergency Medical Preparedness and Assistance Network (REMPAN[75]) provides access to a large number of specialized facilities, equipment and expertise of WHO's collaborating institutions for consultation, diagnosis and treatment of radiation injuries and delayed health consequences of nuclear or radiological emergencies. In an emergency, WHO staff and/or REMPAN experts may join IAEA's missions deployed to the field.
- Coordinated by RAD, the WHO BioDoseNet[76] — a global network of biodosimetry laboratories — provides technical assistance and advice and may support the response to a large event when the existing cytogenetic capacity is overwhelmed.
- The International Food Safety Authorities Network (INFOSAN) is a joint initiative between WHO and FAO. This global network consists of 177 Member States to promote the rapid exchange of information during events related to food safety; share information on important issues of global interest related to food safety; promote partnership and collaboration among countries; and help countries strengthen their capacity to manage food safety risks.
- Limited funds and generic medical supplies allocated by respective WHO departments for general emergency and humanitarian actions may be used to facilitate initial response of the WHO to an emergency.

In addition to emergency response, WHO, in accordance with its statutory responsibilities, works with its regional offices, specialized networks and national and international agencies and organizations on strengthening the preparedness and capacity building of the national public health systems of its Member States.

WHO cosponsors relevant IAEA safety standards, guides and requirements, including: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA Safety Standards Series No. GSR Part 3; Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part

[75] WHO REMPAN: http://www.who.int/ionizing_radiation/a_e/rempan/en/index.html
[76] WHO BioDoseNet: http://www.who.int/ionizing_radiation/a_e/biodosenet/en/index.html

7; and Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSG-2.

WHO worked with the Joint FAO/WHO Codex Alimentarius Commission on the establishment of the revised Codex Guideline Levels for Radionuclides in Food.[77]

WORLD METEOROLOGICAL ORGANIZATION (WMO)

Address

Routine Contact	Emergency Contact
World Meteorological Organization 7 bis, Avenue de la Paix 1211 Geneva 2 C.P. 2300 Switzerland http://www.wmo.int	For details, see the USIE address book

B

Responsibilities and authorities

The World Meteorological Organization (WMO) is a specialized agency of the United Nations. It is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources.

WMO promotes cooperation in the establishment of networks for making meteorological, climatological, hydrological and geophysical observations, as well as the exchange, processing and standardization of related data, and assists technology transfer, training and research. It also fosters collaboration between the National Meteorological and Hydrological Services of its members and furthers the application of meteorology to public weather services, agriculture, aviation, shipping, the environment, water issues and the mitigation of the impacts of natural disasters.

In the specific case of weather, climate and water related hazards, which account for nearly 90% of all natural disasters, WMO's programmes provide vital information for the advance warnings that save lives and reduce damage to property and the environment. WMO also contributes to reducing the impacts of human induced disasters, such as those associated with chemical and nuclear accidents, forest fire and volcanic ash.

The WMO consists of its 191 Member States, its operational meteorological centres and its secretariat, which is headquartered in Geneva, Switzerland. The secretariat represents the WMO at the IACRNE, including its working groups, such as the Ad Hoc Working Group on Air and Maritime Transportation.

The WMO is a full Party to the Assistance Conventions and, as such, the WMO, in coordination with IAEA:

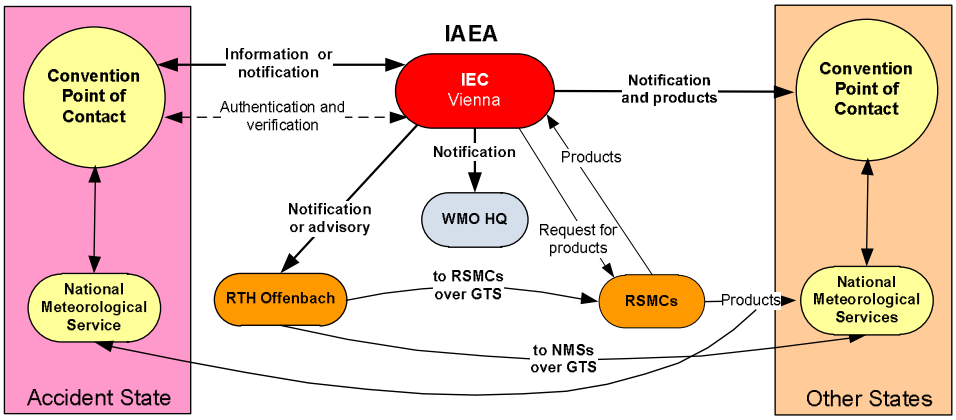
[77] JOINT FAO/WHO FOOD STANDARDS PROGRAMME, General Standard for Contaminants and Toxins in Food and Feed, Schedule I – Maximum and Guideline Levels for Contaminants and Toxins in Foods, Radionuclides, (CODEX STAN 193-1995), FAO, Rome (2010).

- Cooperates to arrange, or facilitate, prompt technical assistance in the event of a nuclear accident or radiological emergency, to minimize its consequences and to protect life from the effects of radioactive releases into the environment;
- Shall establish appropriate operational procedures for emergency notification, requests and responses involving WMO's operational Regional Specialized Meteorological Centres (RSMC) specializing in atmospheric transport, dispersion and deposition modelling, and the relevant National Meteorological Centres;
- Shall, when requested and within the limits of its capabilities, identify and notify the IAEA of experts, equipment and material that could be made available for the provision of assistance to a relevant international organization participating in this Joint Plan, or a State Party in the event of a nuclear accident or radiological emergency and the terms, especially financial, under which such assistance could be provided;
- Should, where the assistance involves personnel, designate in consultation with the requesting organization or State, the person who should be in charge of and retain immediate operational supervision over the personnel and the equipment provided by it. The designated person should exercise such supervision, including reasonable working arrangements, in cooperation with the appropriate authorities of the requesting organization or State;
- Shall make known to the IAEA and to relevant international organizations participating in this Joint Plan, and States Parties directly or through the IAEA, its competent authorities and point of contact authorized to make and receive requests for assistance, or delivery of operational services. Such points of contact shall be available continuously, and the IAEA shall promptly be informed of any changes in the information;
- Shall protect the confidentiality of any so designated information in connection with the assistance in the event of a nuclear accident or radiological emergency.

Standing operational procedures have been implemented to allow for the urgent request for assistance by States Parties, coordinated with their respective National Meteorological Services or through the IAEA. WMO's network of RSMCs is in around the clock readiness to provide assistance to any requesting country or the IAEA. In addition, WMO cooperates with other relevant international organizations, through the Joint Plan, coordinated by the IAEA. The assistance consists of expertise in the field of atmospheric transport, dispersion and deposition modelling, as well as operational weather forecasting services that support emergency response operations. These procedures are maintained in the technical regulations of WMO, in WMO's Manual on the Global Data-Processing and Forecasting System (WMO No. 485). Expert meteorological services beyond those that have been prearranged can be requested through the Secretary-General of WMO.

Organization

The organizational diagram depicts the manner in which the IAEA and WMO cooperate in order to notify and provide meteorological products to States during an emergency.



Capabilities and arrangements

WMO manages its Emergency Response Activities programme as part of the World Weather Watch (WWW) programme. The programme is coordinated under the technical responsibility of the WMO Commission for Basic Systems. The relevant activities of WMO include: provision of environmental observational data and meteorological analyses and forecasts; operation of the WMO Information System, (WIS, maintained from what formerly was the Global Telecommunication System (GTS)) in support of the Early Notification and Assistance Conventions; and, from dedicated RSMCs of the WMO Global Data-Processing and Forecasting System (GDPFS), provision of specialized atmospheric transport, dispersion and deposition modelling forecast products. In addition, the National Meteorological and Hydrological Services (NMHSs) that could call on assistance from the RSMCs, advise their respective governments in meteorological and hydrological matters related to an environmental emergency in accordance with pertinent national regulations. Additionally, the IAEA has implemented procedures jointly with WMO for obtaining meteorological support from designated RSMCs.

The IAEA issues notification messages using email and facsimile distribution, in conjunction with its secure USIE web site, as a means of communication. The WMO offers its WMO Information System (WIS) as a global-reach backup communications network. The WMO Regional Telecommunication Hub (RTH) Offenbach dispatches relevant messages to the WIS, which uses the WMO abbreviated bulletin heading WNXX01 for global distribution.

At present, there are eight RSMCs designated for this activity, including: Exeter and Toulouse (for Europe and Africa); Washington, D.C., and Montreal (for North, Central and South America); Beijing, Obninsk and Tokyo (for Asia); and Melbourne (for South West Pacific). They operate sophisticated atmospheric simulation models to provide information on actual and anticipated atmospheric transport, dispersion and deposition of airborne radioactivity. All RSMCs operate around the clock, every day. National Meteorological Centres, using products from the RSMCs, provide meteorological support services to their respective relevant national authorities.

The Regional and Global Arrangements for the provision of transport model products for environmental emergency response are specified in the technical regulations of WMO, contained in the WMO Manual on the GDPFS (WMO No. 485)[78] and

[78] WMO-No. 485 - *Manual on the Global Data-processing and Forecasting System*, (2010 Edition, Annex IV to the WMO Technical Regulations), Appendices I-1, I-3 and II-7. Also included in *Documentation on RSMC*

essential aspects may be accessed on the WMO Web site under: World Weather Watch (WWW), Programmes, Emergency Response Activities, at: www.wmo.int

A list of contact points for the RSMCs, national meteorological centres (NMCs), and the WMO Secretariat is available on this WMO web site, accessible from 'Contacts'.

While the WMO Secretariat has the responsibility for coordinating the overall participation and contribution of WMO in the operational emergency response system, its offices are normally opened during normal office hours, in Geneva, Switzerland.

support for environmental emergency response (targeted to meteorologists at NMSs), WMO-TD/No. 778 (on-line version only, at www.wmo.int).

APPENDIX C
Roles and Capabilities of Corresponding Organizations

This appendix describes the roles and capabilities for the emergency preparedness and response to nuclear or radiological emergencies of those corresponding organizations that cooperated in the preparation of the Joint Plan.[79]

INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES (IFRC)

Address

Routine Contact	Emergency Contact
IFRC Geneva Office location: Route de Pré-Bois, 1 1214 Vernier, Switzerland Mailing address: PO Box 303 1211 Geneva 19 Switzerland Tel: +41 22 730 4222 Email: secretariat@ifrc.org http://www.ifrc.org	For details, see the USIE address book

Roles

The International Red Cross and Red Crescent Movement (the Movement) is the world's largest humanitarian network. The Movement is neutral and impartial and provides protection and assistance to people affected by disasters and conflicts.

The Movement is made up of nearly 100 million members, volunteers and supporters in 190 National Societies and consists of three main components:

- The International Committee of the Red Cross (ICRC);
- The International Federation of Red Cross and Red Crescent Societies(IFRC);
- 190 member Red Cross and Red Crescent National Societies.

[79] The following texts have been provided by the respective organizations.

Founded in 1919, the IFRC comprises 190 member Red Cross and Red Crescent National Societies. The IFRC's work is based on the Movement's seven fundamental principles: humanity, impartiality, neutrality, independence, voluntary service, unity and universality. Red Cross staff and volunteers also work under the protection of emblems — Red Cross, Red Crescent, Red Crystal — that are embedded in International humanitarian law. These are respected worldwide, and with the auxiliary role of the National Societies with their respective governments provides unique access to those in need within and across borders.

Guided by the IFRC's Strategy 2020, the addresses major humanitarian and developmental challenges while "saving lives and changing minds". The activities of the IFRC are guided towards reaching its strategic aims: "Save lives, protect livelihoods, and strengthen recovery from disasters and crises"; as well as to "Enable healthy and safe living".

With its network of National Red Cross and Red Crescent National Societies and more than 16 million active volunteers who work within communities in the areas of disaster response and recovery, disaster preparedness and risk reduction, we are most of the time the first on the scene of disaster. The community based responders are capable of going the last mile in reaching out to vulnerable communities to provide early warning, support them to prepare for disasters and crises, to deliver life-saving assistance and to remain with the affected people throughout the post disaster recovery process to build resilience to withstand future shocks.

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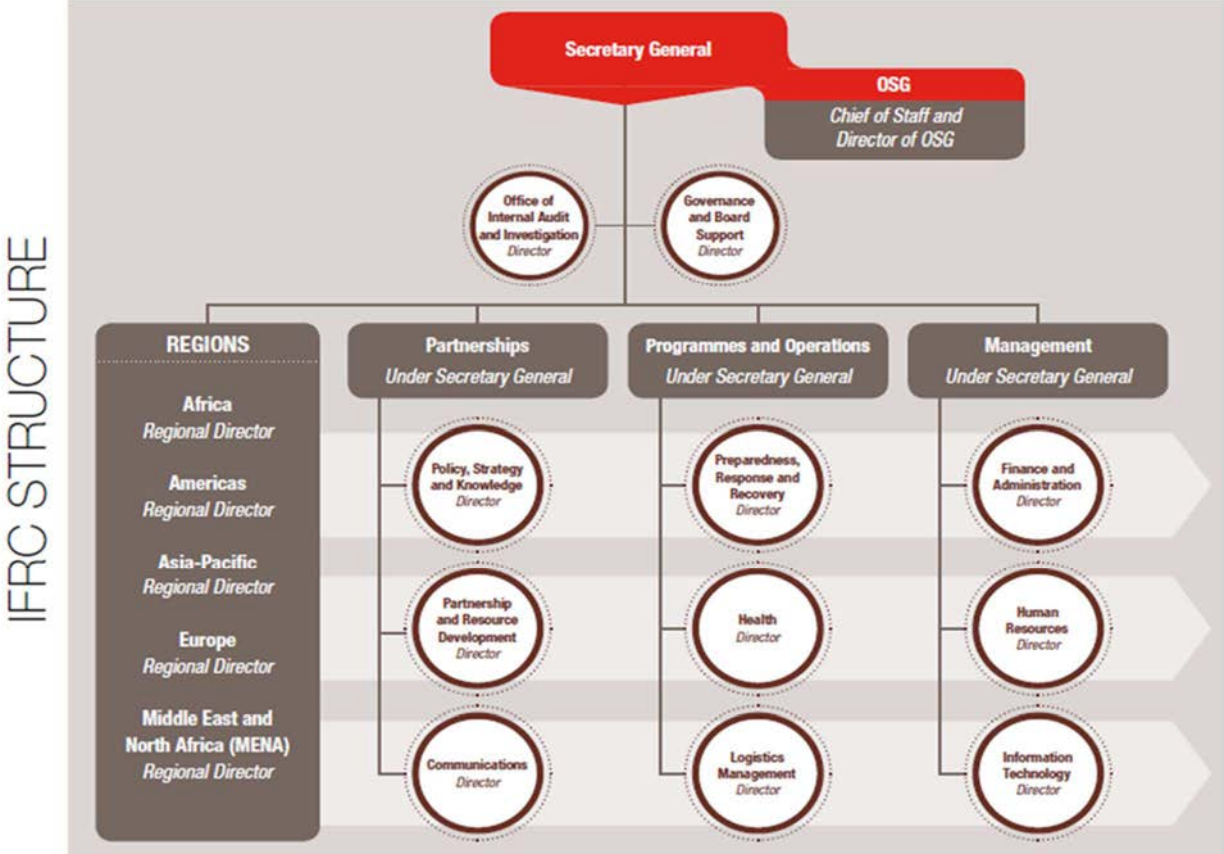
The IFRC coordinates international support for development programmes and mid- to large scale disasters and crises. The IFRC's mandate and mission, as stipulated in its Constitution, are, inter alia, to provide support to its member National Societies and to "…act as the permanent body of liaison, co-ordination and study among the National Societies and to give them assistance" (Article 5(1) (A) (a)) and to "…encourage and co-ordinate the participation of the National Societies in activities for safeguarding public health and the promotion of social welfare in co-operation with their appropriate national authorities" (Article 5(1) (A) (d)).

National Red Cross and Red Crescent Societies, supported by the IFRC, work directly with communities to reduce risk of disasters, mitigate their effects, prepare to respond and respond to them and recover from them. The IFRC's approach is developed within a resiliency framework that is defined as the ability of individuals, communities, organizations or countries exposed to disasters and crises and underlying vulnerabilities to anticipate, reduce the impact of, cope with and recover from the effects of adversity without compromising their long term prospects. In this respect, the IFRC's disaster management role organizes and manages resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters and crises.

Organization

The IFRC's secretariat is located in Geneva, Switzerland, and is supported by five regional offices in Africa (Nairobi), the Americas (Panama City), Asia and Pacific (Kuala Lumpur), Europe (Budapest), and the Middle East and North Africa (Beirut), covering more than 60 delegations strategically located to support activities around the world.

The following diagram illustrates the structure of the IFRC.



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Capabilities and arrangements

Disaster management work often starts long before the onset of a disaster. National Society volunteers and staff support their communities to identify prevalent hazards and vulnerabilities as well as local capacities and coping mechanisms. Based on the analysis, the communities develop initiatives to address risks, ensure local preparedness and response plans exist, improve early warning systems and where possible advocate for broader risk reduction measures through local governance processes. National Societies assist communities also to prepare their response by building local emergency stock and training community members' skills in first aid. The more prepared a community is, the more resilient it will be in the event of a disaster.

After a disaster, the arrival of Red Cross Red Crescent staff and volunteers is often the first sign to people affected that their cry for help has been heard and that assistance is on its way. National Society community, branch and national response teams play a crucial role as first responders. They understand local needs, capacities and vulnerabilities. They provide timely assistance and are able to find locally driven, sustainable solutions. The volunteers can immediately take life-saving actions such as search and rescue, first aid and evacuation. This is reinforced with the provision of basic needs including food and emergency health care, shelter, clean water and sanitary conditions.

Our assistance also reaches well beyond the perceived or announced end of an emergency phase. Since Red Cross and Red Crescent volunteers and staff are part of the local community, they continue to support the recovery of those affected. Recovery assistance builds on the affected people's spontaneous efforts to cope, recover and rebuild. It starts early, alongside relief, seeking to assist people over the

peak of the crisis and continues into the mid-term to build more resilient lives. Recovery programming comprises well linked action to protect and restore livelihoods, enhance food security as well as a wide range of other actions such as community and public health, temporary and longer term shelter provision, protection and psychosocial support. These activities are undertaken in a way that reduces dependency, mitigates conflict and works towards meeting longer term risk reduction objectives.

Communities do not separate out their needs into sectors and neither does the IFRC. The IFRC's integrated approach to disaster management means that instead of providing one standard type of sector based assistance, the organization aims to tailor assistance to meet the varying needs of individuals and communities in a holistic manner that complements the efforts of the local authorities, international agencies and local civil society organizations.

Thanks to the National Society's network and the IFRC's global response system, resources and expertise are organized from around the world to complement the local response when required.[80] The IFRC has also a number of long established and effective response capacity, tools and systems at the local, national, regional, and global levels that can be activated immediately and deployed to the scene of a disaster within hours.[81]

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The IFRC's disaster management resources also include sector specific expertise in the form of emergency health and care, water and sanitation, shelter and settlements, food and basic non-food relief, restoring family links, psychosocial support, and logistics support with hubs placed close to disaster-prone areas complemented by an extensive network of pre-positioned relief goods stored in warehouses that ensure people affected by disaster or crisis can be immediately reached with life-saving assistance.

A key component of the IFRC's disaster and crisis management approach is to achieve safer, more resilient communities and stronger, better prepared National Societies, with continuous capacity building to ensure the continued ability to prepare for, respond to and recover from disasters. The IFRC also plays an important role in the Humanitarian cluster, and is the convener of the Shelter Cluster for natural disasters. For nuclear and radiological emergencies, the IFRC can leverage assessment and response expertise while relying on external partners' scientific and technical expertise and support.

[80] In the form of emergency health and care, water and sanitation, shelter and settlements, food and basic non-food relief, restoring family links, psychosocial support, and logistics support, with hubs placed close to disaster-prone areas complemented by an extensive network of pre-positioned relief goods stored in warehouses that ensure people affected by disaster or crisis can be immediately reached with life-saving assistance.
[81] IFRC DM Surge Capacity tools: Field Assessment and Coordination Team (FACT), Regional Disaster Response Team (RDRT), Emergency Response Unit (ERU), Disaster Relief Emergency Fund (DREF), Emergency Appeal (EA), Emergency Plan of Action (EPoA) and Emergency Operations Centre (EOC).

UNITED NATIONS SCIENTIFIC COMMITTEE ON THE EFFECTS OF ATOMIC RADIATION (UNSCEAR)

Address

Routine Contact

Secretary, United Nations Scientific Committee on the Effects of Atomic Radiation
Vienna International Centre
P. O. Box 500
1400 Vienna
Austria
http://www.unscear.org

Emergency Contact

For details, see the USIE address book

Roles

The United Nations Scientific Committee on the Effects of Atomic Radiation was established by the General Assembly of the United Nations in 1955. Its mandate in the United Nations system is to assess and report levels, effects and risks of exposure to ionizing radiation. Specifically, the General Assembly has mandated[82] the Committee:

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- To receive and assemble in an appropriate and useful form the following radiological information furnished by Member States of the United Nations or members of the specialized agencies:
  - (i) Reports on observed levels of ionizing radiation and radioactivity in the environment;
  - (ii) Reports on scientific observations relevant to the effects of ionizing radiation upon humans and their environment by national scientific bodies or by authorities of national governments;
- To compile and assemble in an integrated manner the various reports on observed radiological levels;
- To review important problems in the field of ionizing radiation and to report thereon to the General Assembly;
- To review and collate national reports evaluating each report to determine its usefulness for the purposes of the Committee;
- To make summaries of the reports received on radiation levels and radiation effects on humans and their environment and indications of research projects which might require further study;
- To transmit, as it deems appropriate, its evaluations to the Secretary-General for publication and dissemination to States Members of the United Nations or members of the specialized agencies;
- In response to a request by the Government of a country which is situated in an area of nuclear arms testing or which considers that it is exposed to atomic radiation by reason of such testing, to appoint a group of experts from among its members for the purpose of visiting that country, at the latter's expense, and of consulting with its scientific authorities and information the Committee of the consultations.

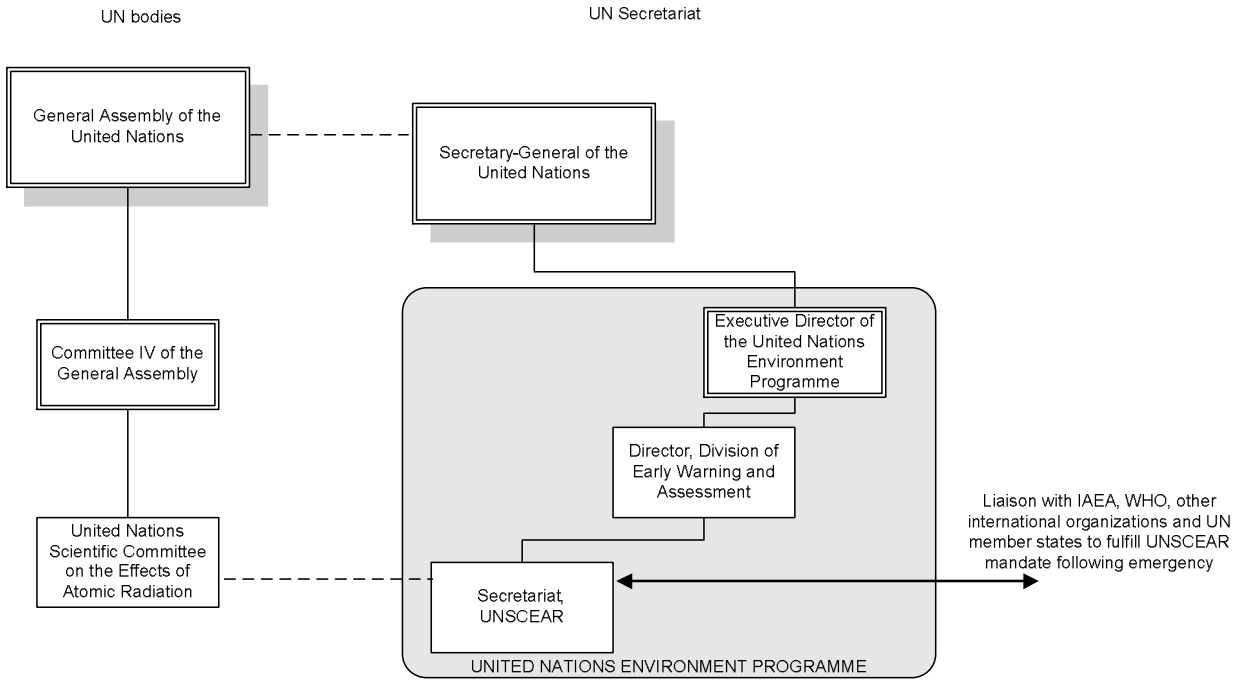
[82] UN General Assembly resolution 913(X), Effects of Atomic Radiation, 3 December 1955; UN General Assembly resolution 3154(XXVIII), Effects of Atomic Radiation, 14 December 1973; UN General Assembly resolution 67/112, Effects of Atomic Radiation, 18 December 2012, etc.

The committee does not address protection or policy related matters, these being within the mandate of other international bodies. This helps to distinguish the committee's responsibility for scientific matters from policy development.

The United Nations Environment Programme provides support for the effective conduct of the work of the Scientific Committee and for the dissemination of its findings to the General Assembly, the scientific community and the public. In particular, it provides the secretariat of UNSCEAR.

Organization

The following diagram illustrates the organization of UNSCEAR for reporting on levels and effects of ionizing radiation.



Capabilities and arrangements

The representatives of 27 UN Member States that have been designated members of UNSCEAR, together with their numerous advisers of various disciplines, represent an asset for international scientific scrutiny of reported levels, effects and risks.

The UNSCEAR secretariat can engage consultants to help prepare material for scrutiny by the committee; it also maintains networks of expertise on matters related to levels and effects of radiation; it operates a web site with information on levels, effects and risks of exposure to ionizing radiation; and, if necessary, it can convene extraordinary sessions of UNSCEAR.

If an event occurs that involves significant numbers of serious overexposures or widespread contamination of water, surface, people or commodities or is of significant concern to the UN General Assembly or the public, the Secretariat of UNSCEAR will, as appropriate: establish liaison with the IAEA, WHO and/or UNEP to coordinate a review of the levels, effects and risks of the exposures for the UN General Assembly, the international scientific community and/or the public; liaise with the Scientific Committee and its Executive Officers; prepare material for public release on the levels, effects and risks of exposure to ionizing radiation; and liaise with the Secretariat of the United Nations with a view to preparing a report for the General Assembly.

The committee produces the UNSCEAR reports, which are detailed reports to the General Assembly. The scientific community regards them as authoritative and balanced reviews of the levels, effects and risks of exposure of humans and the environment to ionizing radiation. The reports review exposures from natural radiation sources, nuclear power production and nuclear tests, medical diagnosis and treatment and occupational exposure to radiation. They include detailed studies on cancer induced by radiation, the mechanisms of the development of cancer and the body's repair systems against it, the hereditary risks induced by exposure to radiation, and the combined effects of radiation and other (for instance chemical) agents.

Although the work of the Scientific Committee is performed by 27 of the UN Member States, its work is conducted on behalf of all Member States of the United Nations and the international scientific community.

The UNSCEAR assessments provide the basis within the UN system for assessment of the risks of exposure to ionizing radiation and for the development of radiation protection standards. The information in the UNSCEAR reports, which are publicly available on the UNSCEAR web site, can be used by communicators to help provide perspective on levels, effects and risks of specific exposures.

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Appendix D

APPENDIX D
Glossary

Accident — Any unintended event, including operating errors, equipment failures or other mishaps, the consequences or potential consequences of which are not negligible from the point of view of protection or safety.

Accident State — The State where an event occurred resulting in a nuclear or radiological emergency.

Advisory — A message to a national or international authority by an authorized competent authority providing details of an actual, potential or perceived nuclear or radiological incident or emergency without the explicit obligation or expectation to do so under international treaty or according to international safety standards.

Arrangements — The integrated set of infrastructural elements, put in place at the preparedness stage, that are necessary to provide the capability for performing a specified function or task required in response to a nuclear or radiological emergency.

Complex emergency — Humanitarian crisis in a country, region or society where there is a total or considerable breakdown of authority resulting from internal or external conflict and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing UN country programme.[83]

Competent authority — A **contact point** in a State or international organization which has the competency and responsibility to notify/report a nuclear or radiological emergency to the IAEA or which has the competency and responsibility to receive notifications from other States or the IAEA on nuclear or radiological emergencies which could affect its State.

Contact point — A generic term for an organization or entity designated by a State or an **international organization** that has a role to play in international exchange of information or request for and provision of assistance concerning a nuclear or radiological **emergency**.

Corresponding organization — **International organization**, observer in the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) with the possibility to cooperate with the participating organizations in preparing this Joint Plan.

[83] These are general definitions used by the international humanitarian assistance community that are not specific to nuclear accidents or radiological emergencies.

Dangerous source A source that could, if not under control, give rise to exposure sufficient to cause a severe deterministic health effect. This categorization is used for determining the need for emergency arrangements and is not to be confused with categorizations of sources for other purposes.

Examples of 'dangerous sources' as defined here are the following: industrial radiography and teletherapy sources; irradiators; radiothermal generators; fixed industrial gauges involving high activity sources; high dose rate and low dose rate brachytherapy sources; well logging sources and similar sources. The following would not be considered 'dangerous sources': moisture density gauges and fixed industrial gauges involving lower activity sources and similar sources.

Disaster A serious disruption of the functioning of a society, causing widespread human, material or environmental losses, which exceed the ability of the affected society to cope using its own resources.[83]

Emergency A non-routine situation or event that necessitates prompt action, primarily to mitigate a hazard or adverse consequences for human life, health, property or the environment. This includes nuclear or radiological and conventional emergencies such as fires, release of hazardous chemicals, storms or earthquakes. It includes situations for which prompt action is warranted to mitigate the effects of a perceived hazard.

Emergency class A set of conditions that warrant a similar immediate **emergency response**.

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Emergency plan A description of the objectives, policy and concept of operations for emergency response and of the structure, authorities and responsibilities for a systematic, coordinated and effective response. The emergency plan serves as the basis for the development of other plans, procedures and checklists.

Emergency preparedness The capability to take actions that are designed to effectively mitigate the consequences of an **emergency** for human health and safety, quality of life, property or the environment.

Emergency procedures A set of instructions describing in detail the actions to be taken by response personnel in an **emergency**.

Emergency response The performance of actions to mitigate the consequences of an **emergency** for human health and safety, quality of life, property and the environment. It may also provide a basis for the resumption of normal social and economic activity.

Facilities and activities A general term encompassing nuclear facilities, uses of all sources of ionizing radiation, all radioactive waste management activities, transport of radioactive material and any other practice or circumstances in which people may be subject to exposure to radiation from naturally occurring or artificial sources.

International organization International intergovernmental organization including specialized agencies and related organizations of the UN system as well as relevant programmes, offices or entities of the United Nations. It excludes non-governmental organizations.

National warning point

A **contact point** that is staffed or able to be alerted at all times for promptly responding to, or initiating a response to, an incoming **notification, advisory** message, request for assistance or request for **verification** of a message as appropriate, from the IAEA.

*In the Early Notification and Assistance Conventions, the term 'point of contact' is used. However, the term was found to be confusing and was often misused by parties. The term 'national warning point' is used here to make it clear that this is the **contact point** that needs to be available 24 hours a day for receipt of a notification, advisory message or request for information or assistance.*

Notification

A report submitted promptly to a national or **international authority** providing details of an **emergency** or possible emergency, for example, as required by the Convention on Early Notification of a Nuclear Accident, or under the provisions of outer space treaties or international safety standards[84] (cf. **Advisory**).

A set of actions taken upon detection of emergency conditions with the purpose of alerting all organizations with responsibility for **emergency response** in the event of such conditions.

Notifying State

The State that is responsible for notifying potentially affected States and the IAEA of an event or situation of actual, potential or perceived radiological significance for other States. This includes: (1) the State Party that has jurisdiction or control over the facility or activity (including space objects) in accordance with Article 1 of the Convention on Early Notification of a Nuclear Accident; or (2) the State that initially detects, or discovers evidence of, a transnational **emergency**, for example by: detecting significant increases in atmospheric radiation levels of unknown origin; detecting contamination in transboundary shipments; discovering a **dangerous source** that may have originated in another State; or diagnosing medical symptoms that may have resulted from exposure outside the State.

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Nuclear installation

A nuclear fuel fabrication plant, research reactor (including subcritical and critical assemblies), nuclear power plant, spent fuel storage facility, enrichment plant or reprocessing facility.

Nuclear security event

An event that has potential or actual implications for **nuclear security** that must be addressed.

Nuclear security

The prevention and detection of, and response to, criminal or intentional unauthorized acts involving nuclear material, other radioactive material, associated facilities or associated activities.

Offer of good offices

A message sent to a **contact point** of an affected or potentially affected State offering the IAEA's services.

Participating organization

International organization, member of the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) and cosponsor of this Joint Plan.

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[84] FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL CIVIL AVIATION ORGANIZATION, INTERNATIONAL LABOUR ORGANIZATION, INTERNATIONAL MARITIME ORGANIZATION, INTERPOL, OECD NUCLEAR ENERGY AGENCY, PAN AMERICAN HEALTH ORGANIZATION, PREPARATORY COMMISSION FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION, UNITED NATIONS ENVIRONMENT PROGRAMME, UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS, WORLD HEALTH ORGANIZATION, WORLD METEOROLOGICAL ORGANIZATION, Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015).

Regulatory body An authority or a system of authorities designated by the government of a State as having legal authority for conducting the regulatory process, including issuing authorizations, and thereby regulating nuclear, radiation, radioactive waste and transport safety.

Transnational emergency A nuclear or radiological emergency of actual, potential or perceived radiological significance for more than one State. This includes: (1) a significant transboundary release of radioactive material (however, a **transnational emergency** does not necessarily imply a significant transboundary release of radioactive material); (2) a general **emergency** at a facility or other event that could result in a significant transboundary release (atmospheric or aquatic) of radioactive material; (3) discovery of the loss or illicit removal of a **dangerous source** that has been or is suspected of having been transported across a national border; (4) an **emergency** resulting in significant disruption to international trade or travel; (5) an **emergency** warranting the taking of protective actions for foreign nationals or embassies in the State in which it occurs; (6) an **emergency** resulting or potentially resulting in severe deterministic effects and involving a fault and/or problem (such as in equipment or software) that could have serious implications for safety internationally; and (7) an **emergency** resulting in or potentially resulting in great concern among the population of more than one State owing to the actual or perceived radiological hazard.

Verification The process of confirming that the information in a message is properly understood.

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Abbreviations

ACC	Area Control Centre (of ICAO)
AGE	Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (FAO designation)
BCPR	Bureau for Crisis Prevention and Recovery
CBRN	Chemical, Biological, Radiological, Nuclear
ConvEx	Convention Exercises (organized by the IAEA)
COMM	European Commission DG for Communication
CRPPH	OECD NEA Committee on Radiation Protection and Public Health
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
DG	Directorate General of the European Commission
EADRCC	Euro-Atlantic Disaster Response Coordination Centre
EC	European Commission
ECDC	European Centre for Disease Prevention and Control
ECHO	European Commission Humanitarian Office
ECN	FAO Nuclear Emergencies Crisis Network of Technical Experts
ECURIE	European Community Urgent Radiological Information Exchange
ENER	European Commission DG for Energy
EURDEP	European Urgent Radiological Information in Exchange Platform
ERC	Emergency Relief Co-ordinator
ESB	Emergency Services Branch (of OCHA)
EU	European Union
EPR	Emergency Preparedness and Response
EUROPOL	European Police Office
EWRS	Early Warning and Response System (of the European Commission)
FAO	Food and Agriculture Organization of the United Nations
FRONTEX	European Border and Coast Guard Agency
GDPFS	Global Data-Processing and Forecasting System (of the WMO)
GTS	Global Telecommunications Network (of the WMO)
IACRNE	Inter-Agency Committee on Radiological and Nuclear Emergencies
IAEA	International Atomic Energy Agency
ICAO	International Civil Aviation Organization
IDC	International Data Centre of the CTBTO
IEComm	Operations Manual for Incident and Emergency Communication
IHR	International Health Regulations
ILO	International Labour Organization
IMO	International Maritime Organization
IMS	International Monitoring System of the CTBTO
INEX	NEA's International Nuclear Emergency Exercise
INTERPOL	International Criminal Police Organization
IRMIS	International Radiation Monitoring Information System
JRC	Joint Research Centre (of the European Commission)
NAFA	Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (IAEA designation)
NATO	North Atlantic Treaty Organization
NEA	Nuclear Energy Agency of the OECD
NEWS	Nuclear Events Web-based System
NOF	NOTAM Office (of ICAO)
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
OOSA	United Nations Office for Outer Space Affairs
OSI	On-Site Inspections of the CTBTO
OSOCC	On-site Operations Coordination Centre (mobilized through OCHA)
RODOS	Real-time On-line Decision Support (of EC)
PAHO	Pan American Health Organization

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PTS	Provisional Technical Secretariat of the CTBTO
RANET	IAEA's Response and Assistance Network
REMPAN	Radiation Emergency Medical Preparedness and Assistance Network (of the WHO)
RESPEC	Radiological Emergency Support Programme for the European Commission
RO	Regional Offices (of WHO)
RSMC	Regional Specialized Meteorological Centre (of WMO)
RTH	Regional Telecommunications Hub (of the WMO)
SANTE	European Commission DG for Health and Food Safety
SG	Secretariat General of the European Commission
SOP	Standard Operating Procedure
UNDAC	United Nations Disaster Assessment and Coordination Team (mobilized through OCHA)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UNISCR	United Nations Office for Disaster Risk Reduction
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
USIE	Unified System for Information Exchange on Incidents and Emergencies [protected IAEA information sharing web based emergency system]
VAAC	Volcanic Ash Advisory Centre (of ICAO)
WAFC	World Area Forecast Centre (of ICAO)
WANO	World Association of Nuclear Operators
WCO	World Customs Organization
WFP	United Nations World Food Programme
WebECURIE	European Commission's urgent information exchange platform
WHO	World Health Organization
WMO	World Meteorological Organization
WPNEM	OECD NEA Working Party on Nuclear Emergency Matters

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APPENDIX E
Publications of relevance to emergency preparedness and response

General

INTERNATIONAL ATOMIC ENERGY AGENCY, Operations Manual for Incident and Emergency Communication, EPR-IEComm 2012, IAEA, Vienna (2012).

INTERNATIONAL ATOMIC ENERGY AGENCY, IAEA Response and Assistance Network, EPR-RANET 2013, IAEA, Vienna (2013).

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INTERNATIONAL ATOMIC ENERGY AGENCY, Actions to Protect the Public in an Emergency due to Severe Conditions at a Light Water Reactor, EPR-NPP Public Protective Actions 2013, IAEA, Vienna (2013).

EUROPEAN COMMISSION, Radiological Protection Principles for Urgent Countermeasures to Protect the Public in the Event of Accidental Releases of Radioactive material, Radiation Protection 87, European Commission, Luxembourg (1997).

EUROPEAN COMMISSION, Radiation Protection Principles for Relocation and Return of People in the Event of Accidental Releases of Radioactive Materials, Radiation Protection 64, European Commission, Luxembourg (1993).

INTERNATIONAL ATOMIC ENERGY AGENCY, Method for Developing Arrangements for Response to a Nuclear or Radiological Emergency, EPR-METHOD 2003, IAEA, Vienna (2003).

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UNITED NATIONS, Ionizing Radiation: Sources and Biological Effects, Report to the General Assembly 2010), United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), United Nations sales publications M.11.IX.4, UN, New York.

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INTERNATIONAL ATOMIC ENERGY AGENCY, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, IAEA Safety Standards Series No. SSR-6, IAEA, Vienna (2012).

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INTERNATIONAL ATOMIC ENERGY AGENCY, Generic Assessment Procedures for Determining Protective Actions during a Reactor Accident, IAEA-TECDOC-955, IAEA, Vienna (1997).

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INTERNATIONAL ATOMIC ENERGY AGENCY, Generic Procedures for Assessment and Response during a Radiological Emergency, IAEA-TECDOC-1162, IAEA, Vienna (2000).

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INTERNATIONAL ATOMIC ENERGY AGENCY, Generic Procedures for Monitoring in a Nuclear or Radiological Emergency, IAEA-TECDOC-1092, IAEA, Vienna (1999).

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WORLD METEOROLOGICAL ORGANIZATION, Manual on the Global Data-processing and Forecasting System (Annex IV to the WMO Technical Regulations), Appendices I-1, I-3 and II-7, WMO-No. 485, WMO, Geneva (2010).

WORLD METEOROLOGICAL ORGANIZATION, Documentation on RSMC Support for Environmental Emergency Response, WMO-TD/No. 778, WMO, Geneva (2014).

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EUROPEAN COMMISSION, Medical Effectiveness of Iodine Prophylaxis in a Nuclear Reactor Emergency Situation and Overview of European Practices, Radiation Protection No. 165, European Commission, Luxembourg (2010).

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INTERNATIONAL ATOMIC ENERGY AGENCY, Guidelines for Remediation Strategies to Reduce the Radiological Consequences of Environmental Contamination, IAEA Technical Reports Series No. 475, IAEA, Vienna (2012).

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E

APPENDIX F
Standard Operating Procedures

Under this Joint Plan, any of the IACRNE participating organizations may propose the development of a specific standard operating procedure (SOP). Once the objectives of the proposed SOP have been discussed and agreed on, the participating organization that proposes to develop an SOP prepares an initial draft and sends it to the IACRNE Secretary.

The IACRNE Secretary checks if the initial draft is prepared in line with the IACRNE SOP template. If not, the IACRNE Secretary, in coordination with the participation organization that drafted the SOP, makes appropriate changes before distributing it by email to all IACRNE participating organizations for their review, comments and additional input (if any). Based on the comments and proposed changes received, the IACRNE Secretary prepares a final draft that will be submitted at a IACRNE meeting for adoption by consensus.

The following IACRNE procedures were adopted at the 24th Regular IACRNE Meeting in November 2014.

IACRNE SOP-101 Review of Web sites — technical review of information posted on web sites of IACRNE organizations related to a nuclear or radiological emergency.

The purpose of this procedure is to provide guidance on a technical review of the information available on the web sites of the IACRNE organizations, in order to identify any discrepancies, confusions, inconsistent terminology, etc. Such a review may cover scientific, technological and other aspects relating to public information.

IACRNE SOP-102 VTC meetings — process for preparing and conducting discussions among the IACRNE organizations using videoconferencing.

This procedure is intended to serve as guidance for the preparation and conduct of the IACRNE VTC meetings.

IACRNE SOP-103 Survey of Governmental Actions in Emergency — survey of protective and other response actions decided or recommended by the governments other than the government of the 'Accident State' — *Interim Solution.*

The purpose of this procedure is to define the process for the governmental decisions and recommendations (GDRs) survey regarding protective and other response actions in a nuclear or radiological emergency and to identify common patterns (if any) and findings in protective and other response actions for a particular nuclear or radiological emergency.

IACRNE SOP-104 Public Communication — public communications of IACRNE organizations during a nuclear or radiological emergency — *Interim Solution.*

As each nuclear or radiological event may present a unique set of circumstances, this procedure is intended to guide the coordination process among the IACRNE organizations either for preparing an individual communication to the public/media or for preparing joint public/media statements.

IACRNE SOP-105 WG-AMT Joint Public/Media Statements — IACRNE Working Group on Air and Maritime Transportation process for the joint public/media statements relating to a nuclear or radiological emergency.

This procedure is intended to serve as guidance on the process of preparing, approving and publishing joint public/media statements of the WG-AMT[85].

F

[85] Airports Council International (ACI), International Air Transport Association (IATA), International Atomic Energy Agency (IAEA), International Civil Aviation Organization (ICAO), International Labour Organization (ILO), International Maritime Organization (IMO), World Health Organization (WHO), World Meteorological Organization (WMO), World Nuclear Transport Institute (WNTI) and World Tourism Organization (UNWTO). At the discretion of the IACRNE, other organizations/associations may be involved in the work of the ad hoc WG-AMT.

APPENDIX G
IACRNE Terms of Reference

Effective Date: 1 January 2011

The Inter-Agency Committee on the Response to Nuclear Accidents (IACRNA) was established after the Chernobyl accident in 1986 as an *ad hoc* interagency mechanism to coordinate preparedness related to nuclear accidents. Its Terms of Reference included ensuring exchange of information among agencies concerning their respective activities and harmonization of these activities; reviewing progress in joint activities; and identification of new areas for interagency cooperation and planning joint actions. Its membership comprised all relevant UN agencies and organizations, focussing on those that are signatories to one or other of the two Conventions (the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency).

The Committee's Terms of Reference were formally amended at the 14th Meeting in November 97 to allow the full participation of other relevant intergovernmental organizations. The scope was also modified to be applicable to preparedness and response.

In the beginning of 1999 a proposal has been prepared for new role of the Committee explicitly covering preparedness and response to nuclear and radiological emergencies. However, the decision of 15th Regular IACRNA meeting was that the existing Terms of Reference were broad enough for the time being and that the "Joint Radiation Emergency Management Plan of the International Organizations" (JPLAN) should be the key framework for interagency cooperation. Since then, the Terms of Reference have been reviewed together with the JPLAN and published in the JPLAN.

Based on the recommendations of the 18th Regular Meeting the revised Terms of Reference were prepared for consideration at the 19th Regular Meeting. At that meeting minor changes were included in the text. Final version was prepared and distributed for comments and approval by members of IACRNA. One editorial comment was received only by the end of November 2007, and the Terms of Reference became effective on 1 December 2007.

At the 20th Regular Meeting, the Committee unanimously decided to change the name to **Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE)** with effective date of 1 January 2009.

Based on the recommendations of the 21st Regular Meeting the revised Terms of Reference were prepared reflecting the change of the name and clarifying the status of

Members and observers of the Committee. The revised Terms of Reference were distributed for comments to Members of the Committee. These Terms of Reference became effective on 1 January 2011.

A General Responsibility

1 The Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) is the coordination mechanism between relevant international intergovernmental organizations (international organizations[86]) to ensure that coordinated and consistent arrangements and capabilities for preparedness and response to nuclear and radiological incidents and emergencies are developed and maintained.

B Scope

2 Activities, arrangements and capabilities for preparedness and response to nuclear and/or radiological incidents, and emergencies under the auspices of the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

3 The Committee's activities do not affect the cooperation arrangements defined in the relationship agreements between organizations, and their day-to-day implementation.

C Functions

4 The Committee has the following functions:

a) to coordinate preparedness arrangements for response to nuclear and radiological incidents and emergencies by, *inter alia*, developing, maintaining and exercising the *Joint Radiation Emergency Management Plan of the International Organizations* (JPLAN), that defines the organizations involved in response and preparedness, their roles and responsibilities, interfaces between them, and between them and Member States, concept of operations, preparedness arrangements, and process for improvement;

b) to work towards coordinated and consistent international standards on preparedness and response to nuclear and radiological incidents and emergencies and their practical implementation in Member States and States Parties of the Conventions; and to strongly encourage its participating organizations to meet the relevant standards;

c) to exchange relevant information among organizations concerning their respective plans, activities and harmonization of these plans;

[86] The term 'international organization' is used to mean 'international intergovernmental organization' including specialized agencies and related organizations of the UN system, relevant programmes, offices or entities of the United Nations, and other relevant non-UN organizations. It excludes non-governmental organizations.

d) to identify new areas for interagency cooperation, to plan, coordinate and review joint actions related to preparedness and response for nuclear and radiological incidents and emergencies including exercises;

e) to coordinate preparation, conduct and evaluation of international exercises, in coordination with the host country, to avoid duplication and make the most efficient use of resources;

f) to review the JPLAN biennially and issue amendments as appropriate; and

g) to bring to the attention of the respective Executive Heads policy issues that cannot be resolved by the Committee.

D Composition

5 The Committee shall be composed of *participating* and *corresponding* international organizations. *Participating* organizations are those international organizations with activities in the area of nuclear and radiological emergency preparedness and response, and who sponsor the JPLAN. *Corresponding* organizations are other international organizations with activities in the field of emergency preparedness and response who do not sponsor the JPLAN but wish to observe IACRNE activities .

6 Participating organizations are **members** of the Committee and corresponding organizations are **observers**. Each *participating* organization will nominate its Member of the Committee. Members should be directly responsible for the relevant activities and have the necessary authority to implement change in working procedures and arrangements. Members are expected to attend meetings of the Committee. *Participating* organizations may nominate additional staff as 'observers' to the meetings. Each *corresponding* organizations may nominate an observer to the Committee.

7 All organizations are responsible for bearing the cost of their involvement in the Committee and its activities.

8 International organizations not currently involved in the IACRNE may submit to the Secretariat a request to become a *participating* or *corresponding* organization, for decision by the Committee Members.

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E Secretariat

9 The IAEA provides the Secretariat for the Committee and designates one staff to be the IACRNE Secretary.

10 The IACRNE Secretary shall be responsible for:

a) preparing an invitation, a provisional agenda, and other meeting documents which shall be circulated sufficiently in advance of meetings;

b) preparing meeting reports and keeping record of decisions made by the Committee; dissenting views shall be recorded as such;

c) setting up and maintaining the IACRNE web site to keep each other informed on upcoming meetings, activities, plans, agreements, procedures, publications, news, etc.;

d) inviting representatives of *corresponding organizations* or other persons to attend any of the meetings as deemed appropriate by the Committee;

e) informing and liaising with *corresponding organizations* on behalf of the Committee; copies of the minutes of the Committee and the JPLAN should be provided to *corresponding organizations* as a minimum;

f) inviting to the meeting other ad-hoc experts as appropriate.

F Meetings

11 The Committee shall meet regularly, approximately every 12 to 18 months or as deemed necessary, according to a rotating schedule established by the IACRNE Secretary in consultation with other Members.

12 The Meeting shall be chaired by the Meeting Chair. The Meeting Chair shall preferably be from the organization hosting the Meeting.

13 The IACRNE Secretary can, in consultation with the Committee, convene extraordinary meetings.

14 Each organization will bear the cost of its representation.

15 In planning dates of meetings, due consideration will be given to holding meetings adjacent to other relevant activities in order to save time and money. Other means to improve communication between Members shall be used where appropriate.

G Reporting

16 The Committee Members are responsible for reporting back to their respective agencies/organizations.

17 All formal communications will be sent to the Executive Heads of the respective organizations with a copy to the existing Committee Member; informal communications need only be sent to the latter.

18 Electronic mail should be used as a prime mechanism for informal communication.

19 Conference/video calls should be used when rapid consultations are required.

H Operating Guides

20 The following are the Committee's operating guides:

a) the Committee Members will make decisions by consensus;

b) each Member is responsible for consulting all other relevant staff in their organizations and their points of contact in the Member States as necessary in advance of meetings and according to the agenda;

c) any decisions that require approval at a higher level within an organization will not be binding until such approval is formally obtained;

d) the Committee may set up *standing* working groups to address key parts of the JPLAN or to work in common areas of interest; and

e) the Committee may set up *ad hoc* task groups to address and resolve common open issues.

I Duration

21 These Terms of Reference enter into force on January 1, 2011. They shall be reviewed biennially together with the JPLAN.

G

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No. 24

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