A FRAMEWORK FOR MAJOR EMERGENCY MANAGEMENT

GUIDANCE DOCUMENT 14

A GUIDE TO SEVERE WEATHER EMERGENCIES

DECEMBER 2010

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MAJOR EMERGENCY
MANAGEMENT

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Introduction to a Guide to Severe Weather Emergencies

'A Framework for Major Emergency Management' (2006) replaced the *Framework for Co-ordinated Response to Major Emergency*, which had underpinned major emergency preparedness and response capability since 1984.

The Framework sets out the arrangements by which the principal response agencies will work together in the management of large-scale incidents.

This *Guide to Severe Weather Emergencies* is intended to support the Framework text and to provide additional guidance on the response of Principal Response Agencies to Severe Weather Events.

This document, like others in the guidance series, is subject to regular review and, for that reason, it is requested that any comments and/or insights that arise during its implementation are fed back to the national level. Comments should be addressed to:

MEM Project Team,
National Directorate for Fire and Emergency Management,
Department of Housing, Planning, Community & Local Government,
Custom House,
Dublin 1.

Or

emergencymanagement@environ.ie

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1. Introduction

During the flooding and severe cold weather that occurred between November 2009 and January 2010, the Principal Response Agencies (An Garda Síochána, the Health Service Executive and the Local Authorities – the PRAs) in many parts of the country responded effectively, using the co-ordination structures and procedures set out in the Framework for Major Emergency Management.

This response included the establishment of Crisis Management Teams, to co-ordinate efforts within each agency, and the activation of Local Co-ordination Groups, to co-ordinate efforts across the PRAs as well as between the PRAs and relevant external organisations, such as the Office of Public Works (OPW), the ESB, the Defence Forces, the Coast Guard and the Voluntary Emergency Services.

In the aftermath of these events there was agreement that, although there was extensive guidance available in the Framework documents, there was a need for specific guidance in relation to Severe Weather Events, which occur over a wide area and last for an extended period of time and, as a result, create unique problems for all responding organisations. This Guidance Document has been prepared in that context.

2. Types of Severe Weather Event

Experience shows that Ireland is threatened by different types of severe weather including:

- Flooding
- Frost/Ice
- Heavy Snow
- Severe Winds
- Thunderstorms

Heatwaves have affected other countries in Europe in recent years and, with ongoing climate change, cannot be entirely discounted from the MEM Risk Assessment and Preparedness processes in Ireland. However, they are not covered in the body of this document (See Appendix C).

3. Consequences of Severe Weather

There are different consequences for each type of severe weather but among the most common are:

- Individuals requiring rescue from their homes, vehicles, etc.
- Roads closed
- Isolation and other problems for the elderly and vulnerable
- Disruption of water supplies
- Disruption of power supplies
- Closure of schools, public transport, businesses, etc
- Disruption of supplies of food, medicines, fuel, etc
- Problems with feeding and shelter for animals
- Damage to infrastructure, such as roads, railways, power lines, etc

4. Issues for the Principal Response Agencies

Severe Weather Events raise many issues for the Principal Response Agencies (PRAs) including in the areas of:

(a) Business Continuity

Depending on the nature and severity of the event:

- Facilities can be compromised (eg, buildings flooded or without electricity)
- Special health and safety issues can arise for staff (eg, hypothermia, slips and falls on ice, vehicle accidents, deep and/or swift flowing water, flying debris during severe winds)
- Emergency and other vehicles may be unable to travel
- Staff may be unable to get to work
- There can be shortages of key supplies (eg, salt for roads, chlorine for water treatment, medicines, fuel, etc.)
- Staff exhaustion can arise as the response goes on for an extended period.

(b) Communication and Public Information

During protracted Sever Weather Events there is usually a demand from the public for up to date, accurate information (eg, what roads are closed? Are school to be closed? Have hospital outpatient clinics been deferred?) There can also be public anger at a perceived inadequate response by the PRAs and the Government, as well as significant media and political interest in the event and the response. In this situation the PRAs need to:

- Continually collect and verify relevant and timely information
- Disseminate this information to the public on a regular basis via all practical means. (During recent Severe Weather Events, information bulletins on local radio at the same time each day proved very effective and these can be supplemented with advice and up to date information on PRA websites)
- Establish Information Lines which can take large numbers of calls from the public and return as quickly as possible to callers with relevant information
- Provide regular, accurate information to:
    - local and national media
    - local and national political representatives
    - national headquarters and/or relevant Government Departments

(c) Prioritise and Organise Response

In many protracted Severe Weather Events which continue for an extended period and/or cover a wide area it is not possible for the PRAs to respond to every request/need for assistance. In this situation the PRAs must attempt to

- Establish the real and most urgent needs of the community
- Set priorities for the response and be prepared to defend these to the public and the media
- Organise and maintain a protracted 24/7 response
- Encourage and assist individuals and communities to respond themselves (“Help Yourself and Your Family”, ”Help your Neighbour”)

(d) Co-ordination

Extended, wide-area Severe Weather Events require intense co-ordination:

- Within each PRA, where some individuals who are not normally involved with emergency response may play key roles
- With other PRAs, within the local MEM region
- With neighbouring PRAs, from outside the local MEM region
- With national agencies, including PRA headquarters and/or parent Departments, other Government Departments, the National Emergency Response Co-ordination Committee, etc.
- With agencies with which they do not normally work closely, such as the ESB, the OPW, the Defence Forces, the Coast Guard and the Voluntary Emergency Services
- With existing and/or emerging local community groups and organisations.

5. Existing Situation

In line with the requirements of the 2006 Framework for Major Emergency Management:

- Each PRA is required to have in place a Major Emergency Plan, including procedures for the mobilisation of resources
- Within each of the eight MEM regions there is a Regional Steering Group and a Regional Working Group, which facilitate the PRAs in the development of inter-agency preparedness.
- There are procedures and processes in place (and individuals who have been trained) to establish and run, as required:
    - PRA Crisis Management Teams
    - On-site Co-ordination Groups
    - Local Co-ordination Groups
    - Regional Co-ordination Groups
    - The National Emergency Response Co-ordination Committee
- Each Local Authority is required to have in place a Severe Weather Plan, as well as Flood Risk Maps and Flooding Plans, as appropriate

6. Generic Recommendations

The following recommendations are, by definition, generic and general in character and are designed to assist the PRAs in preparing for and responding to Severe Weather Events. The recommendations are divided into those which are relevant to the Pre-emergency, Warning, Response and Recovery stages.

(a) Pre-Emergency Stage

Principal Response Agencies should individually and/or jointly:

- Examine the relevant sections of their existing MEM Risk Assessments, with particular attention to:
    - Individuals and/or communities who are particularly vulnerable to Severe Weather effects, such as flooding, impassable roads, etc
    - Key elements of Community and PRA infrastructure which are particularly vulnerable (eg, buildings subject to flooding, emergency generators located in basements threatened by flooding, etc)

- Put in place any mitigatory elements and/or strategies which will protect vulnerable individuals, communities and infrastructure
- Ensure that all necessary plans, as per the Framework (such as Severe Weather Plans, Flood Plans, etc), are in place and have been exercised and tested
- Ensure that all staff members who are likely to play a key role in the response are aware of the appropriate plans, procedures and systems and the role which they will be expected to play in response
- Prepare standard advice and guidance documents/leaflets for the public which can be updated and used whenever a Severe Weather Event occurs or is threatened, including topics such as:
    - Advice to the elderly on keeping warm and well in cold weather
    - Preparing for Severe Weather
    - Helping elderly and vulnerable neighbours during severe weather
    - Safe driving in Winter Conditions
    - Lists of key telephone numbers
- Consider strategies to build community resilience by:
    - Educating the public on the needs for individuals/households to consider their vulnerabilities and prepare accordingly
- Engage locally with key agencies that are likely to be involved with the PRAs in the response including the Defence Forces, the OPW and the ESB, with a view to establishing a better understanding on each side of the requirements, capabilities and limitations of the others and forging links which will facilitate a speedy activation during Severe Weather Events
- Engage with the relevant community groups and state organisations such as the Irish Farmers Association, the GAA, local Rural Social Schemes and FAS Community Schemes with a view to enhancing local community resilience.

(b) Warning

Severe weather warnings can be divided into two separate types as follows:

- Warnings which are issued by different organisations and used by Local Authorities to decide on the appropriate response, and
- Warnings which are issued to the public.

(i) Warnings to Local Authorities

Appendix F6 of the Framework sets out the arrangements put in place by Met Eireann to issue Public Service Severe Weather Warnings to the Local Authorities. Weather related warnings and alerts can also be received from other sources, such as the ESB. Each Local Authority should ensure that it has in place effective arrangements to receive and respond promptly to such warnings.

Every warning or alert should be considered by a Local Authority in the context of other relevant information available to it (such as, hydrological information from the OPW and local knowledge of river systems, roads, infrastructure, vulnerable communities, etc). Based on this information, a 'Best Guess' weather impact assessment should be prepared in each case.

Depending on the nature of this weather impact assessment, a warning and/or activation instruction should be issued to all appropriate sections of the Local Authority, as well as to the relevant PRAs. A Major Emergency should be declared, where appropriate.

This table sets out the different types of warnings and forecasts which can be received by a Local Authority; it divides the possible weather impact assessment into four categories; and for each category it gives an overview of the likely Local Authority Actions and Inter-Agency Activity.

Types of Warnings / Forecasts	Impact Assessment by the Local Authority	Local Authority Actions	Inter-Agency Activity
Public Service Severe Weather Warning from Met Eireann General Met Eireann Weather Forecast or Alert	Event will almost certainly exceed the response capability of the Emergency Services and satisfies the Framework definition of a Major Emergency	**Declare a Major Emergency**; notify other PRAs of the Declaration; activate LA Major Emergency Plan; inform DoEH&LG	On-Site and Local Co-ordination Groups activated as appropriate.
Warning from agency such as the ESB. Information from the IceCast Road Weather Information System Tidal surge warnings (eg, Dublin TRITON system)	Event will probably cause significant damage to property, disruption to the community and the delivery of normal PRA services but falls short of the definition of a Major Emergency	**Convene CMT**; commence response; contact other PRAs with view to a first teleconference; inform DoEH&LG	PRAs in contact with option of either regular teleconferences or activation of Local Co-ordination Group
	Event will possibly cause significant damage to property as well as disruption to the community and the delivery of normal PRA services.	Place the Local Authority **CMT on standby**; notify Alert to relevant sections of the LA; notify other PRAs; inform DoEH&LG	PRAs in contact with option of teleconference
	Event is a routine Severe Weather Event requiring alert by relevant operational sections	Respond to event as per standard procedures; keep situation under review; inform other PRAs and DoEH&LG where appropriate	Inter-Agency arrangements not usually activated.

(ii) Warnings to the Public

In some situations it may be appropriate to issue warnings to the public. Some warnings may be required for the whole country, or a region of it, as, for example, in the case of an approaching storm or blizzard; other warnings may be required for a smaller area, such as a river catchment, in the case of very heavy rainfall. These warnings will normally be issued by Met Eireann. Alternatively, a warning may be required for a specific local area, such as a town, threatened by rising flood waters. This type of local warning will normally be provided by the Local Authority.

In either case it is important that the content of any public warnings are carefully considered, with a view to optimising the response of the public, and the most appropriate means of disseminating those warnings identified. These means will usually involve national and/or local broadcast media, as appropriate, which can be supplemented, in the case of specific local areas identified as being at risk, with emergency vehicles and personnel to deliver the warnings.

(c) Response

Whenever a Severe Weather Event occurs, or is threatened, the PRAs should respond in a manner which is appropriate to the severity of the event (or threatened event) and, for the purpose of this guidance document, these events have been divided into four classes as follows: Major Emergencies, Exceptional Severe Weather Events, Severe Weather Alerts and Routine Severe Weather Events.

Note: During the response to a Severe Weather Event, the PRAs should use all appropriate structures and procedures of the Framework for Major Emergency Management including Crisis Management Teams, Local Co-ordination Groups, Regional Co-ordination Groups and the Information Management System, whether or not a Major Emergency has been declared.

(i) Major Emergencies

Where a Severe Weather Event occurs, or is imminent which, in the opinion of an authorised officer of one of the PRAs, satisfies the definition of a Major Emergency, as set out in the Framework, that individual should declare that a Major Emergency exists, activate the PRA MEM Plan and notify the other relevant PRAs accordingly.

Note: It is possible that in some Wide Area Severe Weather Major Emergencies there may not be a single site to which PRA resources can respond and, for that reason, co-ordination of the response will be largely conducted at the Local Co-ordination Group level.

Note: It is also possible that Major Emergencies may be declared in a number of adjoining areas and two or more Local Co-ordination Groups may be activated. In this situation the chairs of the Local Co-ordination Groups should discuss the possibility of establishing a Regional Co-ordination Group. Alternatively a Local Co-ordination Group may be expanded to become a Regional Co-ordination Group. (See Section 9)

(ii) Exceptional Severe Weather Events

Where a Severe Weather Event occurs (or is imminent) which, in the opinion of the authorised officers of the relevant PRAs, does not satisfy the definition of a Major Emergency, as set out in the Framework, but where there is (or is likely to be) significant damage to property and/or significant disruption to the community and/or significant disruption to the delivery of normal services by one or more of the PRAs, for an extended duration and/or over an extensive area, the Exceptional Severe Weather Events Response Procedures set out below should be activated.

(iii) Severe Weather Alerts

Where a Local Authority receives a warning or otherwise becomes aware of a possible upcoming Severe Weather Event, which threatens significant damage to property and/or disruption to the community and/or disruption to the delivery of normal services by one or more of the PRAs, the relevant alert procedures should be activated.

These procedures should include notification of the alert to other relevant PRAs, notification of the alert to relevant services within the Local Authority, the placing on standby of the Local Authority Crisis Management Team and the provision of information on the alert to the Department of Environment, Heritage and Local Government.

(iv) Routine Severe Weather Events

Each year the PRAs have to contend with the effects of Routine Severe Weather Events including icy roads, localised flooding, trees blown down by storms, etc. Local Authorities have well practiced procedures in place to deal with such events including gritting roads, pumping out flooded buildings, etc. These incidents are responded to without the need for special co-ordination, either internally or between the PRAs.

It is recommended that existing procedures for such events should continue but PRAs are requested to keep such events, when they occur, under continuous review, in the light of any potential escalation, which might require the activation of the Exceptional Severe Weather Events Response Procedures of this document.

(d) Recovery

During the Recovery stage of any Severe Weather Event, which involves the declaration of a Major Emergency and/or the activation of the Exceptional Severe Weather Event Procedures of this document, relevant PRAs should be in a position to address the Recovery issues set out in Section 6 of the Framework for Major Emergency Management 2006, including:

- Assisting the physical and emotional recovery of victims
- Providing support and services to persons affected by the emergency
- Clean up of damaged areas
- Restoration of infrastructure and public services
- Investigations/enquires into the events and/or the response; and
- Restoring normal functioning to the Principal Response Agencies.
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7. Exceptional Severe Weather Event Response Procedures

Where a Severe Weather Event has impacted or has the potential to impact significantly on communities and/or PRA services for an extended period and/or over a wide area, the relevant PRAs should each:

- Convene a meeting of the Crisis Management Team to consider the implications of the event for both the organisation and the communities affected
- Make contact with Senior Management in the other PRAs affected (Chief Superintendent, Regional Director of Operations, City/County Manager/ Director of Service) with a view to a conference call to discuss
    - The impact of the event on the community and each organisation; and
    - Whether a Local Co-ordination Group should be activated
- Inform national headquarters and/or the parent Government Department, as appropriate, of the extent of the event and the emerging issues.

Since the Local Authority is the Lead Agency for weather related emergencies and since the Local Authority is normally involved at an early stage in the response to severe weather (gritting roads, pumping out flooded buildings, etc.) it is likely that the Local Authority will normally initiate the first conference call between the PRAs at Senior Management level. However, this does not preclude either An Garda Síochána or the HSE from initiating such a conference call.

Where Major Emergency structures are to be used for co-ordination in a situation where a Major Emergency has not been declared, the Local Authority which activates these structures should make clear to the other PRAs:

- that it is acting as Lead Agency, and
- the relevant co-ordination structures which it is activating.

This information should also be provided to any support organisations, such as the Defence Forces, the ESB and the OPW, which are being invited to participate in the co-ordination structures.

Where the initial assessment by a PRA CMT, or a first conference call of local PRA senior managers, concludes that there is no need for further action at that time, it is strongly advised that a process for continuous evaluation is put in place and provisional arrangements for a further meeting/conference call are agreed.

8. Outside Agencies

During a Severe Weather Event, the PRAs will have to deal extensively with other organisations who may have important information or who may be in a position to assist in the response, such as occurred with the Office of Public Works, the ESB and the Defence Forces during the flooding events of the Winter 2009/10. At the first meeting of the Local Co-ordination Group, a list of such organisations should be prepared and all relevant organisations should be invited to send liaison persons to meetings of the Site and/or Local Co-ordination Groups, where appropriate.

9. Regional Level Co-ordination

Where a Severe Weather Event impacts over a wide area, a number of Local Authorities, Garda Divisions or even HSE Regions may be involved. In such a situation consideration should be given to establishing a Regional Co-ordination Group and structuring the inter-service response on a regional basis.

A Regional Co-ordination Group can be established in a number of different ways as the following examples illustrate:

Firstly, where a Local Co-ordination Group has been activated by the City/County Council at the centre of the impact zone, contact should be made by the chair with the senior management of neighbouring PRAs, part or all of whose areas of operation are affected, with a view to inviting these PRAs to send representatives to participate in the group, which will then become, de facto, a Regional Co-ordination Group.

Secondly, where the impact of the Severe Weather Event occurs over all or most of an MEM Planning Region, the members of the Regional Steering Group may decide to activate a Regional Co-ordination Group in one of the designated Local Co-ordination Centres in the region.

Note: The Framework recognises that the designated MEM Planning regions may not always be the most appropriate ones for response. For example, in the case of flooding, the region for response could be based on a river basin or part of a river basin.

Thirdly, where a number of Local Co-ordination Groups have been activated, each group will be in communication with the National Emergency Management Centre and national level co-ordination may be the most appropriate form of overarching co-ordination across the local groups.

Finally, where a number of Local Co-ordination Groups have been activated, the chairs may take the view that a Regional Co-ordination Group should be established. Such a group will normally be located at the Local Co-ordination Centre which, in the view of the chairs, is best positioned (in terms of resources, communications and geography), to co-ordinate the activity of the different Local Co-ordination Groups which are active.

Note: During a Severe Weather Event, each Local Co-ordination Group will communicate with the National Emergency Management Centre, or the Regional Co-ordination Group, as appropriate, through their chairs.

Note: During a Severe Weather Event it may not be practical for all PRAs to send representatives to Regional Co-ordination Group meetings and, in such situations, consideration should be given to the use of teleconferences and/or other technology which can facilitate virtual meetings.

The major advantages of Regional Level Co-ordination are that it facilitates:

- Effective co-ordination across a wide area
- Better co-ordination with national/regional groups, such as the ESB, the OPW and the Defence Forces.
- Co-ordination with the National Emergency Response Co-ordination Committee.

10. National Level Co-ordination

During a Severe Weather Event, where it is considered appropriate, the National Emergency Response Co-ordination Committee may be convened at the National Emergency Co-ordination Centre, Kildare Street, Dublin. This committee may be activated whether a Major Emergency has been declared or not.

Once the National Emergency Response Committee has been mobilised, it is important that each Local and Regional Co-ordination Group, which has been activated, should establish communications with the NDRCC via the relevant Lead Agency (ie, the Local Authority).

Once communication has been established, the format and frequency of reports between the local/regional and the national levels, which will vary depending on the nature, severity and extent of the Severe Weather Event, can be established.

Appendix A – Relevant Documents

For further information on planning for and response to severe weather emergencies please see the following:

- A Framework for Major Emergency Management*
- A Framework for Major Emergency Management, Appendices*
- A Guide to Risk Assessment in Major Emergency Management*
- A Guide to Planning and Staging Exercises*
- A Guide to Working with the Media*
- A Guide to Local Co-ordination Centres*
- A Guide to Managing Evacuation*
- A Guide to Flood Emergencies*
- A Protocol for Multi Agency Response to Flood Emergencies*
- Garda Division Major Emergency Plans
- HSE Area Major Emergency Plans
- Local Authority Major Emergency Plans
- Local Authority Severe Weather Plans
- Local Authority Flood Hazard Maps
- Local Authority Flood Emergency Plans
- Local Authority Drinking Water Incident Response Plans
- Regional Inter-Agency Media Plans.

* All of the documents with * are available on www.mem.ie

Appendix B – Local Authority Specific Issues

Local Authorities respond to weather warnings as part of their normal business. For example, the Roads Section is typically involved in road gritting and other actions in response to a forecast of cold weather.

Local Authority responses can be triggered by a number of warning systems, including:

- Public Service Severe Weather Warnings from Met Eireann
- The IceCast Road Weather Information System (RWIS)
- River and Coastal Flood Warning Systems

The Office of Public Works (OPW) is in the process of developing a comprehensive flood warning system but the completion of this system is still some way off. In the meantime, weather information, combined with hydrological information from the OPW and others and local knowledge of river systems, should be used to predict and manage flooding.

Each Local Authority is required by the Guide to Flood Emergencies to have in place Flood Hazard Maps and Flood Emergency Plans. Each Local Authority is also required to have a Flood Assessment Team/Flood Assessment Manager. The role of this Team is to monitor weather conditions and warnings and provide analysis of the flood risk before and during an event, as well as providing specialist advice to the operational services deployed to a flood event (reference Section 3.6.2 of Guidance Document 11: A Guide to Flood Emergencies).

In the case of non-flood emergencies, the Local Authority Crisis Management Team, or other appropriate group within the Local Authority, should consider the forecast/ warnings provided, in the context of all other available information, and provide a "Best Guess" assessment of the likely impact of the threatened Severe Weather Event.

Local Authority staff who respond to weather warnings on a regular basis should be familiar with this document and, in particular, the processes for the escalation of a response and co-ordination, within both their own agency and at the inter-agency level, so that weather events, which threaten to be, or are, of unusual intensity and/or are spread over a wide area and/or are likely to continue over an extended period, can be responded to in an appropriate fashion.

Where a Local Authority is dealing with severe weather or flooding that is outside of its normal capacity to deal with, or where it considers that a Major Emergency may have to be declared in the future, the Department of Environmental, Heritage and Local Government (the Lead Government Department for response to Severe Weather Events) should be informed at an early stage via telephone number 1800 303 063. This number was initially envisaged as a means of communicating to the Department the declaration of a Major Emergency but recent Severe Weather Events have highlighted the importance of early notification to the Department of emerging issues so as to facilitate the activation of national support for the local response.

Appendix C – Heatwaves

In August 2003 France was affected by unusually high temperatures which resulted in approximately 15,000 excess deaths. Most of these deaths occurred among the elderly population.

Ireland's location and climate would indicate that the risk of such a heatwave occurring here is low but, with ongoing climate change, cannot be discounted.

The PRAs, and in particular the HSE, need to consider the main hazards associated with a heatwave and to take appropriate and proportionate preparedness measures.

There is evidence that increasing temperatures lead to excess deaths among:

- The elderly, especially women over seventy five
- Individuals with chronic and severe illness
- Babies and the very young
- The homeless.

In preparation, for any possible future heatwave the HSE should:

- Prepare guidance material which will be issued to all relevant service providers whenever a heatwave is threatened
- Raise awareness among those who care for the elderly and other at risk groups of the actions which may be necessary in the event of a heatwave.

Appendix D – Checklist

At Regional Level

Oversee local compliance with the actions below
Develop clear arrangements for the escalation of response to a Regional Co-ordination Group

At Local Level

Each Local Authority should have a Severe Weather Plan in place (this plan should include arrangements to receive and respond promptly to Severe Weather Warnings and make timely contact with the designated senior staff of the other PRAs)
Each Local Authority should have flood risk maps
Each HSE Region and Garda Division should have either a Severe Weather Plan or Procedures to manage risks associated with severe weather
PRAs are required to prepare standard advice and guidance documents or leaflets for the public whenever a Severe Weather Event occurs or is threatened.