EMERGENCY PREPAREDNESS CAPACITY BUILDERS

Risk Management Self Assessment Framework

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Risk Management Self Assessment Framework

Introduction

A stadium fire. A dam failure. A toxic release at a vulnerable congregation hub. Explosions at an iconic site. A sinking ferry. A leak from a factory into adjacent dwellings. Floods and landslides which wash away shanty towns. Fires at the urban-forest interface. Crowd crush incidents. Earthquakes which destroy poorly built homes and disrupt vulnerable lifelines. Why and how do these disasters occur? How can we do better to do something about them?

Disasters do not “just happen”. Many are characterized by symptoms of poor management such as:

a) relying on routine capabilities to provide a sufficient response in an extraordinary context;
b) inadequate problem definition;
c) working in isolation;
d) relying on approaches from the past;
e) focusing resources on the hazard event and not the prevention opportunities; and
f) focusing resources on the hazard event and not the impact implications.

These symptoms indicate failures of the key performance tests for good emergency planning - about **our state of knowledge and its application**: considerations around what you ought to know (or be reasonably expected to find out) about risks and their treatment.

This paper puts forward considerations about what characterizes good emergency planning and how it might be assessed. What assessment criteria make up **a necessary and sufficient set**?

We emphasize as a first and underpinning principle the importance of the planning process over the 'plan as a document' approach. The Internet and our electronic society have seen a proliferation of "planning templates". 'Just fill in the blanks and there you go!' This approach is 'nominal plan as procrustean bed'. The word processor and electronic mail have much to answer for in planning, where it is not uncommon to find the same plan with some global word changes parading as rigor for different locations, organizations and risks.

Unless a plan has evolved from a "needs basis" and is generated through a process involving those who have an interest it will never quite "fit". The off the rack document (plan) only shows up as a failure when it comes apart at the seams under the stress of reality (performance). While this is not to suggest documentation is unimportant, it is to suggest its proper place is as a supporting record of arrangements and enabling processes. Of itself it does not constitute sufficient evidence of performance.

This distinction between plans and planning is well reinforced by Enrico Quarantelli, a doyen of disaster preparedness who defines (disaster) planning as “a process ... which involves all of those activities, practices, interactions, relationships, and so forth, which over the short term or long run are intended to improve the response pattern at times of (disaster) impact”. (Quarantelli, 1987:15)

If an initial question is 'should I place significance on a plan?', we suggest the answer is **'yes...but'** only if the plan is derived from a dynamic, ongoing, iterative process.

What influences planning?

Two significant influences on any entity's emergency planning capabilities, be it a business, an organization, a city or a region are its **Structure** and its **Culture**.

Structure as a management concept has been defined as "a collection of institutions, rules of behavior, norms, roles, physical arrangements, buildings and archives that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals" (March & Olsen, 1984: 741).

Culture is closely associated with structure and "includes all the institutionalized ways and the implicit cultural beliefs, norms, values and premises which underlie and govern behavior" (Payne, 1991:26). Many of our institutions are characterized by "an underlying, durable pattern of rules and behavior" (Dovers & Connor, 2002:4). Strong cultures produce systems, structures and role models which become resistant to change. A central problem related to planning capabilities is that "many cultural solutions, particularly those which develop into a strong culture, contain the seeds of their own destruction" (Payne).

A good illustration of this phenomenon is Sir John Franklin's expedition of 1845 - it bears quoting at length:

> *In 1845 Sir John Franklin set out on an expedition to find the fabled Northwest Passage linking the Atlantic and Pacific oceans through the Arctic Circle. It was a vitally important expedition because, if the Northwest Passage existed, it could have provided a link between Britain and her far-flung Empire. Sir John and his company of 138 officers and men sailed in two three-masted barques with auxiliary steam engines. He expected the voyage to last two to three years.*
>
> *Arctic conditions were, of course, dramatically different from those of England. However, the ships were equipped as replicas of English Royal Navy officers' clubs. Each ship had a 1200-volume library; there were copious amounts of china place settings, cut glass wine goblets and sterling silver table-ware and cutlery. The cutlery was engraved for the individual officers, with each officer's initials and family crest. Unfortunately, items such as these took up so much space that room could be found for only twelve days supply of coal for the auxiliary steam engines. They took no special clothing for the Arctic conditions, just the rather splendid naval uniforms, and equipment was standard: there were, for instance, no sleds.*
>
> *It took twenty years to find the remnants of the expedition: the ships had been destroyed by the pack ice, but frozen bodies were found in groups, many kilometers from where their ships had disappeared. These were remnants of the scattered parties that had desperately sought survival in the alien land. Some members of these parties were still dressed in their fine blue uniforms, edged with silk braid and gold buttons. Surprisingly, in the improvised sleds and the ship's boats they had dragged for tortuous kilometers were large quantities of ornate table silver.'* (Dunphy & Stace, 1992:1)

Dunphy and Stace (1992) put the question of whether this is a metaphor for our times. We know there is a significant range of current practices where organizations "persist in doggedly dragging with them the cultural baggage of the past, despite all the evidence that it is a useless or dangerous encumbrance".

Culture and structure are clearly important. The crucial trick is to get it right:

> In management policy, **structure**, introduced into operations by design, is both a means of limiting error and of clarifying choices for action by multiple participants over time in complex environments. ...The **challenge** lies in **designing** this **structure** in ways that **achieve** the **stability** desired for effective performance of the management system, **without restricting** the **flexibility** required for adaptation to changing conditions. (Comfort, 1988:18)

Successful companies, institutions and organizations frequently share the characteristic of a strong culture. Continued success, especially under conditions of uncertainty requires they '...build into their strength the capacity to be adaptable, to look for change and new opportunities'. (Payne) This crucial capability will serve the entity well in both the general market place and in crisis.

From traditional methods and narrow paradigms

The way we order the world is partly a function of what we know, or hold to be important. But what we know is also dependent on how we order the world - what we look for, and how we articulate it.

Foucault tells a delightful story whereby his questioning of how we view the world "first arose out of a passage in Borges, out of the laughter which shattered, as I read the passage, all the familiar landmarks of thought - *our* thought, the thought that bears the stamp of our age and our geography - breaking up all the ordered surfaces and all the planes with which we are accustomed to tame the wild profusion of existing things and continuing long afterwards to disturb and threaten with collapse our age-old distinction between the Same and the Other. The passage quotes 'a certain Chinese Encyclopedia' in which it is written that animals are divided into:
(a) belonging to the Emperor
(b) embalmed
(c) tame
(d) suckling pigs
(e) sirens
(f) fabulous
(g) stray dogs
(h) included in the present classification
(i) frenzied
(j) innumerable
(k) drawn with a very fine camel-haired brush
(l) *et cetera*
(m) having just broken the water pitcher
(n) that from a long way off look like flies.

In the wonderment of this taxonomy, the thing that we apprehend in one leap, the thing that is demonstrated as the exotic charm of another system of thought, is the limitations of our own, the stark impossibility of [us] thinking *that*" (Foucault, 1970: xv).This delightful illustration reminds us of, among other things, the constraints with which we sometimes saddle and blind ourselves when we carry certain paradigms and taxonomies into areas which call for broad, flexible approaches.

Knowledge of disasters has been heavily influenced by reference to three key fields of information - time location and hazard agent (e.g. The Great 1906 San Francisco Earthquake). This tradition is significant in several ways. In the case of 'industrial' disasters, until recently, it has not identified the company involved; and in the case of 'natural' disasters focus is on the hazard agent. A perception develops of disaster caused by the fire, the flood, the cyclone, the “wall of energy” - the specific and particular 'externality'.

The dominant model (paradigm) still has disasters being caused by hazards. There is recognition of impact but this recognition is generally couched as being due to 'man or his works' being in the way of the hazard agent. The scientific study of hazards has largely driven the way we view and manage risk. This orthodox paradigm continues to be advanced in leading forums. These orthodox interpretations of disasters are characterized by the “sense of causality or the direction of explanation ... from the physical environment to its social impacts” (Hewitt, 1983:5). Additionally, the attractiveness of the 'God as cause' thesis has not been lost on those who can see in it a reasonable basis for either liability reduction or the promulgation of ignorance.

Many current emergency management processes are historical legacies of narrow approaches. Some are reactions to events. The "my turf" sensitivity of organizations with historically derived responsibility for safety defined in relation to particular hazard agents (such as fire) has reinforced a focus on hazard agents and a set of general and widespread assumptions around the belief across communities at risk that "they will rescue me". These assumptions should be challenged - to believe them increases vulnerability. We can not reasonably expect to do today's job with yesterday's methods and be in business tomorrow. In response to pressures for change, approaches to emergency management need to better meet people's needs. Some of the key shifts needed are summarized below:

FROM only		TO including
Reactive capability	⇒	Proactive approaches
Hazard response	⇒	Risk management
Science driven	⇒	Multi - disciplinary approach
Vulnerability assessment	⇒	Resilience building
Instruction to	⇒	Empowerment of
Dependence on	⇒	Self-Reliance
Planning for people	⇒	Planning with people
Communicating to people	⇒	Communicating with people

Table 1: Required shifts in emergency management thinking

These shifts involve a performance migration beyond 'responding to events' to embrace the broader set of issues associated with 'risk and its management'. This issue set involves a focus on vulnerability, not just hazard – seizing on vulnerability as both an indicator of risk and a "window of opportunity". The purpose of vulnerability assessments is to focus on capacity building opportunities. These shifts are fundamental in nature, involving paradigm shifts which will impact the culture of organizations and the safety of people.

Towards emergency risk management

At a general level, risk management is sound (systematic and thorough) problem solving. A sound problem solving approach to incorporating stages of scoping the boundaries of the opportunity or problem; finding out about the issues within those boundaries; and making decisions about what to do about seizing the opportunity or solving the problem. Similarly, a risk management approach to emergency management uses a broad, systematic and rigorous approach.

Management	**Emergency Risk Management**
Problem Definition	Identify Issues & Establish Management Framework
Research	Identify & Characterize Hazards and Vulnerabilities
	Develop Evaluation Criteria
Analysis	Profile Risks
Decision Making	Evaluate Risks
Implementation	Identify, evaluate and implement Capacity Building strategies

Table 2: The Alignment of Problem Solving and Risk Management

Successful problem structuring is a crucial first step in developing successful solutions. The management priority is how best to reduce major risks. Yes, considerations related to hazard exposure are necessary elements of emergency management; however they are not sufficient. A comprehensive

and integrated taxonomy of emergency management strategies is necessary. In emergency management we are switching from an emphasis on response and recovery activities for specific events to an emphasis **on a range of measures to manage risks.**

The approach requires clear recognition of distinctions between hazard and risk:

- Hazard, as "something" with the potential to produce harm.
- Risk, as a concept used to give meaning to "things, forces or circumstances" that pose a danger.

Descriptions of risk are typically stated in terms of likelihood of loss (from a hazard).
Emergency Risk management is not merely a tool for analysis / assessment.

It is **a framework for the systematic application of procedures and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risk**.

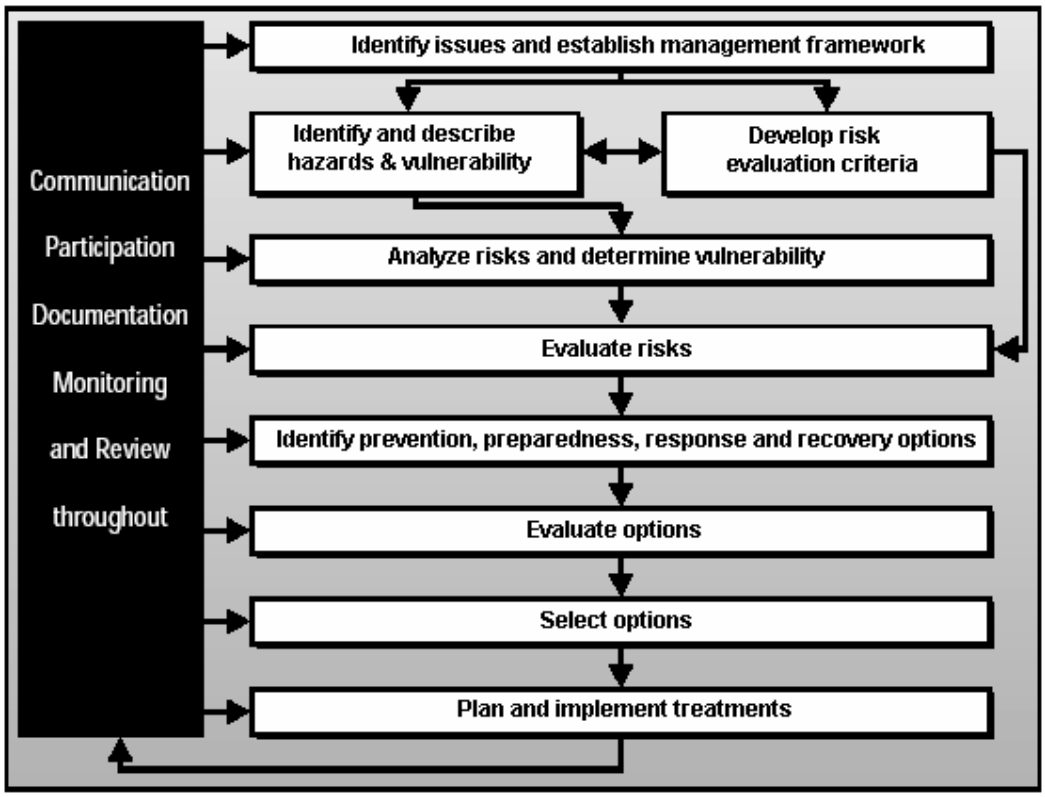

Figure 1 Emergency Risk Management Framework (Source http://emergencyriskmanagement.com)

We have adopted, the implications of the construct that **R *f* H & V** (where R = Risk; H = Hazard; and V = Vulnerability). Crucial to this more comprehensive and integrated process is a focus on vulnerability. Vulnerability is about:

- **exposure (primarily proximity to hazard agents)**
  - this is relatively easily "mapped" in geographic space.
- **sensitivity**
  - this is not as easily "mapped" in geographic space, as it occurs in social space.

The development of **V *f* (S & E) / C** (where V = Vulnerability; S = Sensitivity; E = Exposure; and C = Capacity) productively informs resilience building approaches. Indeed, the only reason to analyze hazards and assess vulnerability is to enhance capabilities.

Aspects to consider include:

a) Focus on the most important aspects of risks pertinent to their management - not just things specific to particular hazard agents. The most important aspects of crises pertinent to their management derive from the hazard agent, the impacted entity and the interaction of hazard and vulnerable entity.

b) Under **'hazard agent'**, the focus should be on factors such as perceived dread, equity, frequency, probability, predictability, physical magnitude / area of impact, energy expenditure / intensity, speed of onset, and duration. These considerations inform length of forewarning, controllability, scope of impact / effects.

c) Under **'impacted entity'**, the focus should be on factors such as critical functions of the entity, logistics and demographics (bottoms on seats etc.), belief systems, knowledge & perceptions of risk and the complexity of the social system (and its constituent groups).

d) Examining the interaction between hazard agent and vulnerable entity is a fuzzy but productive line of inquiry and planning. The focus of lead combat authorities on 'walls of water', 'walls of fire' or 'walls of whatever' gives way to a consideration that **vulnerability and human social organization are the critical determinants of both risk and impact**. This view usefully recognizes disasters are first and foremost 'non-routine social problems'.(Alexander, 1992)

Consider moving from rigidity to fluidity factors with regard to your arrangements. Remember, 'a management system viewed as a set of organizational ecologies that simultaneously inform and support one another, is likely to provide a more timely and appropriate response than an organization directed from a single centralized source of authority' (Comfort, 1988). If vulnerability is the central problem for which contingency is required, then capacity building and resilience offer scope for a solution. Resilience must extend to and permeate the structure, and culture of entities (families, households, businesses and organizations).

"Community" is usefully defined as **"any group with a shared association"**. They may be a geographical area or groups with common interests (including business entities and service providers). In terms of "community", a group may be identified by:

a) Geographically-based groupings of people such as: households, neighborhood, suburbs, towns, local government areas, cities, regions, states and the nation.
b) Shared-experience groupings of people such as: particular-interest groups, ethnic groups, professional groups, language groups, age groupings, those exposed to a particular hazard.
c) Sector-based groupings such as: agricultural, manufacturing, commercial, mining, education sectors. It may be necessary to consider groups within these sectors (e.g., the food processing group within the manufacturing sector).
d) Functionally-based groupings such as: service providers responsible for systems or networks which provide for the movement of people, goods, services and information on which health, safety, comfort and economic activity depends (lifelines).

The concept of "communities" provides a valuable model for emergency management as it lends itself to collective action. The philosophy behind the approach is one of empowerment. Capacity is about things of "use value" (resources) – considerations include issues such as access to information, cultural knowledge, and social networks. Empowered "communities" (households, organizations or businesses) become increasingly able to deal with more and complex issues. Indeed, the "community" that has established capabilities for building relationships, organizing intervention, and achieving results has taken the valuable first steps to becoming more resilient.

Roger Kaufman (2000:190) employs a framework with a **"Focus on the Chain of Results"** called MEGA PLANNING. The terminology is a "brand" which requires interpretation – but it is useful:

a) Mega is the first and basic level of planning in which we select our contribution to society, including our clients' well being (above and beyond the goods and services we supply to them).
b) Only when this Outcome is agreed do we move to the Macro level at which the organization plans to be successful in producing its Output.
c) At the Micro level, successful groups in the organization integrate to contribute the Products required for Macro success (Output), and Mega success (Outcome).

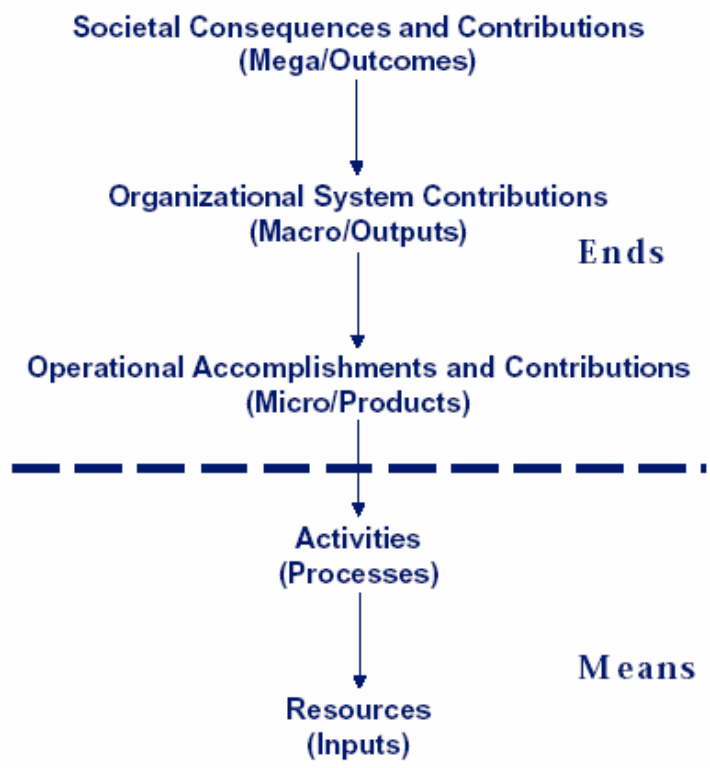

Figure 2: Kaufman's Chain of Results Model

Kaufman's approach is fundamentally about desired futures – focusing on ends. What do we want the future to look like – what is the gap – (or as Kaufman would say, the need). How do we bridge it? A systems approach – such as Emergency Risk Management, provides an excellent context and framework within which to pursue improvement opportunities – both in process and outcome terms. A fundamental requirement is to have a clear focus on the key capabilities underpinning this Emergency Risk Management framework – hence a self assessment framework.

Self Assessment Framework

Let us look at five key elements of emergency risk management – and let us consider whether they are necessary, and possibly sufficient, achievement areas for self assessment :

1. Establish Context
2. Analyze & Prioritize Risks
3. Develop Intervention Programs
4. Communication and Warning
5. Train, Exercise and Evaluate

Undertaking the Self-Assessment

A supporting tool by way of a straightforward and easy to use Excel spreadsheet is available at no cost from http://emergencyriskmanagement.com . Each of the five elements or sections has five questions. Each of the five questions has four possible answers: 'N', 'P', 'L', 'F' ("Drop Down" options in the answer column), as shown:

Possible answer	Definition
N	**Not generally applied** or only applied in isolated situations for example in less than 20% of cases
P	**Partially applied**, not usually documented or applied in less than 50% of cases
L	**Largely applied**, formally documented and largely repeatable or applied in up to 85% of cases.
F	**Fully applied**, formally documented and fully repeatable or applied in more than 85% of cases.

The self assessment has been designed to allow users to input their own targets for achievement and provides space for the assessor(s) to record evidence to support the answer to each question. If you consider that a question is not applicable, use the default value of "N" in the Scoring Box and in the Target drop down. Users are encouraged to support their reasons by completing the "Evidence Box" on the worksheet.

Where appropriate, comments have been embedded throughout the questionnaire to provide the assessor with further explanation about the questions should it be required. The comments are denoted by a red flag in the top right hand corner of a cell. Comments can be read by holding the cursor over the cell.

1. Establish Context.

This element of the framework is about the strategic, organizational and risk management context in which the rest of the process will take place is established.

Criterion 1.1 Top level endorsement is achieved.
Evidence: Top level commitment and sign off endorsing the (emergency risk management) approach is achieved from the entity. This commitment should be maintained by providing feedback as appropriate.

Criterion 1.2 Key stakeholders are identified and differentiated.
Evidence: Groups are defined as "those which have a number of things in common" - they include any shared association relevant to the risk management context. These include the people in the area of impact, employees and their families, suppliers, vendors, and other parties with a stake in the entity and continuity of its operations, providers of social protection (such as planning authorities and emergency service organizations). Differentiation should be conducted in a discrete and respectful way with a view to identifying those with different responsibilities, rights and needs. Consideration may be given to those with whom close, confidential work needs to be done; those who have needs to be supported and informed; and those who (only) need to be made aware in the planning process.

Criterion 1.3 Structure is mapped.
Evidence: The structure (functions and processes) of the entity are mapped and understood. Mapping is a function of context. In the Business Continuity context, mapping can be usefully aligned with an accepted best practice framework such as the Universal Process Classification Framework for the private sector developed by the American Productivity and Quality Centre in conjunction with Arthur Andersen, IBM, DEC and Xerox. In the Public Sector context, the adapted model developed by

the Australian National Audit Off ice may be more suitable. These frameworks provide a sound generic basis for the identification of critical functions for consideration in Business Continuity Planning. Mapping should be to an appropriate level of detail depending on context entity. It should define the relationship between the organization and its environment - it may identify the organization's strengths, weaknesses, opportunities and threats.

Criterion 1.4 Critical functions are identified.
Evidence: Critical functions and processes (for business continuity) are identified from the mapped structure. There should be a ranked hierarchy of functions grouped and filtered on the basis of those needed first, if not immediately, through to those which are discretionary.

Criterion 1.5 Risk Assessment Criteria are established.
Evidence: To what extent are risk assessment criteria established early in any given process. In a systematic risk management approach, it is important that risk evaluation criteria are established early. To what extent are decisions concerning prioritization made based on a consideration of a range of technical, financial, legal, social, humanitarian or other criteria? Impact considerations may concentrate on one area only or on several possible areas of impact. It is important to focus on criteria important to the entity – this will define and bound the way information is analyzed and decisions are made. Criteria appropriate to the entity's context may incorporate any of following: People; Costs both direct and indirect – such as loss of production capability; social issues reflecting high level of community concern (sensitivity such as imposed risk, dread, equity, and involvement of culturally cherished assets). Legal criteria related to "serious" category under Environment Protection Acts / Disaster Declarations Legislation met; Loss Containment where release (of energy or toxins) off-site may have detrimental effect; Ecosystems and other proximal sensitive receiving environments; Asset and resource base of the organization, including personnel; Revenue and entitlements; Performance; Timing and schedule of activities; Intangibles such as reputation, goodwill; or organizational behavior. To what extent are approaches to establishing likelihood or probability thresholds considered and resolved? The issues of uncertainty associated with complex, rare, extreme events make the establishment of an agreed approach problematic given probability is derived from the mathematics of closed sets. The criteria should be corporately endorsed. To what extent are they developed through an agreed, corporately endorsed process; and then signed off on.

2. Analyze & Prioritize Risks.

Causes and effects of the hazard/vulnerability interaction are analyzed.

Criterion 2.1 A range of methods is used.
Evidence: A range of analysis methods and tools should be used. These include, but are not limited to: What-if, Check list, What-if check list, Hazard and operability studies, Failure modes and effect analysis, Fault trees, Failure-logic diagrams, event tree analysis. Specific tools are often suited to particular hazards.

Criterion 2.2 A broad and comprehensive information set is gathered to profile vulnerability.
Evidence: Existing information about the vulnerability of the entity at risk is collected and reviewed. Review criteria should include currency, reliability, and accuracy. The "environmental" information is broad and comprehensive. The information should cover and provide input to considerations related to the risk assessment criteria. It should include but is not limited to systems or networks which provide for the movement of people, goods, services, and information upon which the health, safety, comfort and economic activity of the community depend; elements from the natural environment such as topographical features, water bodies, and ecosystems; and the nature of the community, incorporating characteristics of elements such as politics, economics, and culture. A range of best practice performance criteria should be used to assess the level of social protection provided by responsible authorities such as planning authorities, emergency service providers and those responsible for warning. Self protection should be assessed in relation to current exposure / location; mitigation and preparedness activities of the entity; knowledge of and attitude to potential risks.

Criterion 2.3 Hazards are identified, analyzed and profiled.
Evidence: Stakeholders are consulted to identify what can happen and how and why it can happen. This involves the identification of all perceived sources of risks, using techniques such as Delphi, brainstorming, polling, and research. Each identified source of risk is researched. This involves collecting and documenting relevant information such as research results, maps, Geographic Information System outputs, expert opinion, case studies and technical reports. Key characteristics of each hazard are established. These include characteristics such as scope, spatial and temporal scale and perceptions. Specific key characteristics will be derived from context – they should focus on supporting decisions using the decided assessment criteria. Key aspects of the hazards to which the entity is likely to be subject are detailed including Perceived dread; Frequency of occurrence; Magnitude and potential intensity; Likely strike location; Probable spatial extent; Duration; Seasonality; and Speed of onset. What, why and how things can arise is identified as the basis for risk analysis. Particular focus should be given to those things which can inform scenario analysis. Any gaps in the required information need to be met. Gaps may be functions of information insufficiency (quantity) or information inadequacy (quality).

Criterion 2.4 Scenarios are created & applied.
Evidence: In the complex emergency management context, scenario analysis is recommended as a core, general methodology. **Risk is usefully explored as a function of Hazard x Vulnerability x Exposure** (where the key elements of Vulnerability are exposure and sensitivity as compounding variables, and capacity or capability as an ameliorating variable).

A focus of considerations should be Business Impact Analysis from the perspective of the entity. Interactive risk characterization should be undertaken. The analysis is a process incorporating considerations of hazard, consequences and vulnerability, within the context of existing control measures, to characterize risk. This form of risk characterization is an iterative, analytic-deliberative process. The risk characterization processes should incorporate a synthesis and summary of information about a hazard that addresses the needs and interests of decision makers and affected parties. The objective of the process is to provide information to assist in the evaluation of risks. The information produced will also assist the process of developing options for the treatment of risk. Any gaps in the required information need to be met. Gaps may be functions of information insufficiency (quantity) or information inadequacy (quality). There should be a focus on techniques which reduce uncertainty. This analysis uses judgments and assumptions which may be based on incomplete information. Therefore best available information sources and techniques should be used when characterizing hazard, consequences and vulnerability. Sensitivity analysis should also be applied to explore uncertainty. Scenarios are varied to examine how the results of a consideration or model vary as individual assumptions are changed. Wherever possible the confidence placed on estimates of levels of risk should be included. Risks descriptions are sufficient and adequate to enable evaluation. The descriptor should cover all of the agreed risk assessment criteria.

Criterion 2.5 Risks are ranked
Evidence: All risks analyzed are ranked using the developed likelihood and consequence criteria.
A matrix with sufficient detail to advise management priority should be used. The evaluation informs a broad range of risk treatment considerations. Evaluation should not only contain information appropriate to response. Prevention, preparedness, response and recovery needs and opportunities should be addressed. There should be a particular focus on the identification of capacity building opportunities under the responsibility, control or influence of the entity.

3. Develop Intervention Programs.

Criterion 3.1 Decision making is sound.
Evidence: Research, information management and decision making demonstrate rigor.
"Crucial Decisions" (after Janis) style approaches are used – including the use of rigor, best available information sources and validation techniques. Benchmarking and table top studies exhibit the characteristics of exemplary case studies.

- Significance i.e. individual case/cases are unusual or of significant interest, the underlying issues are important to the entity in some way or both of the above.
- Completeness i.e. within constraints of time or funding, distinction between the phenomenon under study and the context, exhaustive collection of relevant evidence.
- Consideration of Alternative Perspectives i.e. rival propositions and analysis of evidence from different perspectives.
- Display of Sufficient Evidence i.e. neutral, selective data collection to judiciously and effectively present the most compelling evidence.
- Composed in an Engaging Manner i.e. clear writing style - engagement, enticement and seduction.

Criterion 3.2 A comprehensive range of options is identified.
Evidence: A comprehensive range of options for treating risk should be identified. This needs to demonstrate evidence of applying an open and innovative approach designed to generate a broad range of risk treatment options. The risk evaluation information for each risk should serve as a suitable input to this process. Frameworks for comprehensive and integrated approaches include Prevention, Preparedness, Response and Recovery; The Hierarchy of Control from safety management disciplines; Standard risk management options of avoiding risk, reducing the likelihood of occurrence, reducing the consequences of occurrence, transferring the risk, or retaining the risk.

Criterion 3.3 Identified options are evaluated.
Evidence: Identified options for treating risk are evaluated against determined criteria. While sensitive to entity context, the criteria used in evaluating the viability of any given option may include considerations of risk reduction potential, cost effectiveness, continuity or sustainability of effects, risk creation potential, leverage leading to further risk reducing actions by others, return on investment payback, compatibility and integration with other actions that may be adopted, and equity.

Criterion 3.4 Risk treatment plans are prepared.
Evidence: Plans should document how the chosen options shall be implemented.

The treatment plan should identify responsibilities, schedules, the expected outcome of treatments, budgeting, performance measures and the review process to be set in place

Criterion 3.5 Risk treatment plans are implemented.
Evidence: Implementation should be assessed to achieve milestones on time and against budget.

4. Communication and Warning.

This aspect of the risk management processes applies across all elements of the framework.

Criterion 4.1 Stakeholder needs are addressed.
Evidence: Communication processes should be inclusive and meet the varying needs of stakeholders. Planning processes interactively involve the exchange of information and opinion about risk and its management among individuals, groups, and institutions.

Criterion 4.2 Risk communication principles are applied.
Evidence: Best practice risk communication principles should be applied. These include a focus on the primacy of purpose - working for resilience outcomes; devoting effort and resources to building bridges with other organizations; establishing long term relationships of trust; not make assumptions about what people know, think, or want done – rather, find out; identify stakeholders; involve all parties that have a stake; involve them early; lean toward sharing more information, not less; be sensitive to norms; speech and dress.

Criterion 4.3 Risk message construction is a focus.
Evidence: Risk messages should be well structured and easily understood. This invokes criteria around the necessary and sufficient elements to be included in messages and the need for the use of sound communication techniques. Use simple, non-technical language; use vivid, concrete images that communicate on a personal level; use examples; acknowledge and respond to emotions; anxiety, fear, anger, outrage, and helplessness.

Criterion 4.4 Communications capability is developed and maintained.
Evidence: Development and maintenance of a reliable communications capability to alert and warn stakeholders and effectively manage response to an actual or impending emergency. To what extent is warning treated as a complete system. The system should integrate the detection of an extreme event with effective communication to those at risk - from observation of indicators of an impeding extreme event to informing those at risk of impact implications and appropriate protective behaviour.

Criterion 4.5 Warning elicits appropriate protective behavior.
Evidence: Warning should elicit appropriate protective behavior.
This evidence is difficult to simulate as it occurs in different and complex contexts under extreme stress - it may need to rely on prior performance analysis and case studies.

5. Exercise, Train and Evaluate.

Activities which train, exercise or evaluate **any elements of business continuity planning** (not only response) may be conducted to promote awareness, develop and demonstrate capability, confirm preparedness or to test plans. A standards based approach includes:

Criterion 5.1 Activity range is broad.
Evidence: To what extent is a broad range of activities which train, exercise or evaluate elements of business continuity planning conducted to promote awareness, develop and demonstrate capability, confirm preparedness or to test plans.

Criterion 5.2 Activity aims are determined.
Evidence: The aim and objectives of each activity (training, exercise or evaluation) are determined. By identifying the need for the activity; consulting with stakeholders; determining activity aim; and determining activity objectives.

Criterion 5.3 Activity is planned.
Evidence: The activity (training, exercise or evaluation) is planned. By consulting with stakeholders; identifying appropriate type of activity to meet need; apply planning processes effectively; and identifying resource requirements.

Criterion 5.4 Activity is conducted.
Evidence: The activity (training, exercise or evaluation) is conducted. By initiating the activity; facilitating the direction of the activity; Monitoring the progress of the activity; and terminating the activity.

Criterion 5.5 Monitor and Review performance.
Evidence: Monitor and review the performance of the risk management system and changes which might affect it. Sources of risk are monitored by environmental scanning. Activities (training, exercises or evaluations) are analyzed and evaluated. By conducting a debrief of the activity; reviewing activity outcomes against objectives; and reporting to stakeholders.

Results

Results can be printed out as a report supported by graphs.

Conclusions

Whether establishing a baseline or identifying opportunities, self assessment will help assess:
• how you are managing;
• where your targets are; &
• what you need to do to bridge the gap.

Any tool needs to meet performance standards from the strategic requirement of measuring all necessary things – in order to make up a sufficient set; through to technical requirements such as only measuring one thing at a time (not mixing up or confusing the count, not double counting etc.). The identified lessons are always only a limited set. As such, the set will restrain good judgment as much as it advises it. Therefore one needs to be advised by well founded premising - and mindfully anticipate ambush by uncertain and difficult circumstances anyway.

The relevant matters to take into account in considering the quality of management exercised center around key performance tests about **state of knowledge and its application**. They focus on considerations around what you ought to know (or be reasonably expected to find out) about (a) risks and (b) their fixes. In particular, these tests are about:

(a) Assessing risk severity:
i) To what extent can and ought you reasonably be able to foresee the extent of harm likely to be caused.
ii) How do you ensure that you exercise "sound" judgment around probability & consequence?

(b) Maximizing intervention opportunities:

i) To what extent can and ought you have control over the things which are likely to give rise to the harm likely to be caused.

ii) How do you consider the practical measures which can be taken to prevent, control, abate or mitigate the harm; how do you ensure that you exercise "sound" judgment around "cost effective" available capacity building options?

Usually applied post hoc by courts and coroners, it is a productive challenge to turn them "upside down" – by building them into our planning processes.

Planning should be about building capability - especially with regard to **Problem Solving and Opportunity Identification.** Approaches based on emergency risk management provide a flexible and holistic framework to better advise emergency preparedness. Analyses focused on vulnerability will by identifying processes that bring about risk, highlight management options which address key underpinning features, structures and processes. In summary, emergency risk management approaches will better enable the identification and implementation of capacity building options which meet your needs.

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