EMERGENCY PREPAREDNESS FOR THE HEALTH SECTOR AND COMMUNITIES: CHALLENGES AND WAY FORWARD

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Integration Strategy and Emergency Preparedness Process in the context of Public Safety

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Introduction

The general framework is the concept of public safety. Emergency Preparedness Programs and Process (EPPP) is more and more accepted as a broad concept. Readiness to cope with the consequences of a disaster and to recover from it is only one output of the preparedness process. There are several other outputs. Therefore when discussing preparedness one has to refer to the concepts of public safety, sustainable development and community based risk management (CBDRM). Preparedness is nowadays defined as an integrated set of long term multi-sectoral activities. One key objective is to contribute to the achievement of an increasing level of readiness within the MOH and the communities to mitigate, to cope with, to respond to and to recover from any emergency situation. Therefore Preparedness encompasses many activities such as[1] :

- At national level : legislation, policy, guidelines, national or sectoral plans and procedures
- At sub-national levels : emergency planning process and programming (all hazards and holistic approach from mitigation to recovery), resources management, authority (decentralization of the response as much as possible)
- Institutions: institutionalization of resources development and management capacity and capability (which includes human resources and training activities). The new concept of integration strategy is a key element of the sound management of the resources of the Institutions and Agencies, including the MOH
- Coordination mechanisms
- Systems for information management (from collection of data, to processing and evidence based decision making and programming)
- Public awareness, participation and education

[1] Many ideas discussed in this paper have been developed by Dr. R Doran for the Asian Disaster Preparedness Centre of Bangkok. WHO-ADPC PHEMAP Training Program.

In this modern context prevention is under the umbrella of mitigation[2], which is part of the broad preparedness process. It is no longer advisable to separate mitigation from preparedness as if these two activities would be separated ones. The incorporation of mitigation into preparedness process is more conductive to capacity building of the health sectors and of the Institutions, and contributes to sustainability of programs and development of the health sector at all levels.

Emergency preparedness activities (EP), which target the capacity building of the level of readiness for emergency response and recovery is part of the EP Programs & Process (EPPP). In this respect preparedness activities for readiness should not be mixed up with preparedness process as a broad conceptual framework. Emergency preparedness activities focus on readiness while health sector preparedness process is much more ambitious.

Public safety and community based risk management as a modern approach to discuss emergency preparedness process and programs

Under its public safety responsibility, governments operate a broad range of public services. However, few governments think about public safety as a discrete issue to be dealt with programmatically, as they do for health, education, the economy etc. Governments tend to monitor public safety at the technical level, by failures rather than achievements. In the context of public safety, the goal of responsible governments is to ensure *safer*[3] *communities* for all to live work and play in. Therefore an appropriate target for public safety risk management is **communities**. In the public safety context, **community risk management** is a strategy for building *safer communities*.

Hazards always present a threat to public safety and often also present a threat to public health in many ways. Hazards and the risks they generate can only be dealt with effectively through public policy, public participation and public–private sector collaboration in the general context of community based risk management strategic approach. The United Nations defines five fundamental pillars of development – health, education, environment, governance and employment (economy). Investment in each and all of these areas is needed if countries are to grow and prosper. The nature of public safety is collective. It has many faces and many players, and it also includes safe environments such as safe air, food and water, access to medical care, sustainable public health prevention programmes, and efficient management of public health in major emergencies, crisis and epidemics. The new threats such as the deliberate use of biological and chemical agents is now considered by WHO as a serious matter that requires specific strategic approaches from the health sector. The new trend is to look at emergencies as a threat to sustainable development and to expect the health sector contributing actively to reduce the threat, to mitigate the consequences and to respond efficiently to emergencies and crisis.

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[2] This is the new approach developed by EMA Australia

[3] safety is relative; absolute safety can never be achieved. *Safer* is used in preference to *safe communities* to convey the message that we must continue to strive for ever higher levels of public safety and we must have tools to measure how safe we are compared to other times and other communities cf. safer sex, safer driving etc.

Clearly, it is not possible to organize effective relief and response in an emergency situation without a great deal of prior planning, ongoing training and active community participation. At national level there must be very clear authority backed by legislation, policies, administrative procedures and technical guidelines which define the roles and responsibilities of each sector and each emergency service. There must be mechanisms for the co-ordination not only of relief, but also of the development of emergency management capacity within services, particularly response capacity at local level. The policy and technical framework for emergency management is set at national level but it is executed at local level, where detailed plans should not only exist, but should be regularly updated and regularly promoted. Finally it is communities which bear the brunt of a disaster, and whose members are the first responders. Communities need to be fully involved in planning for the hazards and emergencies that affect them. To safeguard the health, wealth and wisdom of its people and to protect the gains of development, it is essential that every country adopt a risk management approach to public safety. This approach must be based on the imperatives of hazard prevention and mitigation, vulnerability reduction and generic emergency preparedness for any hazard, and complemented by generic emergency management capacity at local level and specialized disaster management capacity at national level.

Physical threats to public safety are called **hazards**. In the public safety context, hazards are limited to anything which has the *potential* to cause harm to *communities*. Hazard is a fundamental concept - terms such as emergency, disaster, vulnerability, risk etc. cannot be understood unless defined in terms of hazard. Starting with hazard, a logical framework linking all these terms can be constructed, resulting in well known conceptual formula[4] such as:

$$\text{Risk } \textit{is proportional to } \text{ Hazard} \times \frac{\text{Vulnerabilities}}{\text{Readiness, Resilience and Coping Capacity}}$$

Comments on the formula:

- This formula tells us that communities are described in term of vulnerabilities and resilience and readiness. For each hazard the vulnerabilities and the resilience are different in the same community. Vulnerabilities are hazard specific. Readiness has also a component that must be hazard specific.
- Hazard is the determinant of the probability of each type of risk. Vulnerability/readiness is a determinant of how much risk.
- Risk is a measurable consequence of vulnerabilities, which are not the only determinants of risk. In a community there are at least 3 determinants of risk :
    - The probability that a hazard will develop its harmful potential
    - Vulnerabilities of each element of the community, which is composed of people, property, services, environment, and assets
    - Current response capacity of the community (mainly determined by the level of readiness)
    - Together they are the modifiers of the base level of risk.

[4] This formula has been adopted by the Asian Disaster Preparedness Center in 2004 as the most appropriate formula.

- In CBDRM community is analyzed and described in terms of its vulnerabilities and its readiness, resilience and coping capacity. The CBDRM conceptual framework is composed of a series of technically different programs (but related)
    - Prevention and mitigation programs, which target the specific characteristics of hazards
    - Development programs, which target mainly the vulnerabilities of the people and the systems
    - Emergency preparedness activities, which target agencies and their readiness
    - The ultimate goal of CBDRM is to protect public safety and to promote safer communities through identification of threats to public safety, through the reduction of risks from the threats and vulnerabilities, and through the empowerment of the communities to respond to and recover from emergencies. Public health is a key element (including hospitals, EMS, etc.)

Emergency Preparedness Program and Readiness

Community risk management cannot work on its own in individual communities. There must be national policies, guidelines and standards which provide common goals and objectives, a framework for planning, a set of proven tools for implementation and indicators (both for process and impact) for monitoring and evaluation.

Readiness requires not only plans, procedures and resources but also emergency training activities and community participation, enhancement of the local capacity and transfer of authority (together with the empowerment for resources acquisition and management). Readiness is the measurement of the current competence of an agency, institution or MOH to quickly and appropriately respond to the impact and the consequences of major emergencies. It measures the capacity, capability, effectiveness and efficiency of the partners in term of skills, knowledge, attitude, authority, policies, plans and procedures. In the context of preparedness and readiness:

- Cooperation means shared goals
- Coordination means shared tasks
- Collaboration means shared resources

Therefore emergency response plan (important part of readiness) is best developed at local and community level. There are some rare situations where the response has to be managed directly by the central levels. The goal for increasing the level of readiness within communities is to enhance their capacity to cope with any situation which demands emergency response using their own resources:

- Institutional and human
- Plans, procedures, and logistics
- Systems for information management

Emergency Preparedness and Management Unit (Disaster Unit) within the MOH[5]

Capacity building of the health sector in emergency preparedness should start by the formal administrative establishment and/or strengthening of a special department/unit within the MoH. Institutionalising this structure is critical as the progress should be sustained and preserved independently of change of political governments or ministries. The recognition of hazard mitigation, disaster reduction and risk reduction as a core function of the MoH with its place in the organizational chart and assigned posts (slots) will ensure the continuity and therefore the credibility of this program[6]. This special department or unit has several functions:

- Establishment of a stable and sustained mechanisms for mitigation programs, vulnerability reduction, risk management, readiness for response and recovery process
- Establishment of specific programs in the MoH
  - To define policy, to issue guidelines, to propose laws and arrangements
  - To support the local and community levels to prepare risk reduction, response and recovery plans
  - To plan and develop its own sectoral capacity and capability (the health sector emergency plan and the national or specific contingency plans such as for epidemics, etc.)
  - To place the MoH as a strong interlocutor
  - To coordinate external assistance, especially international assistance
  - To fulfil its guidance and normative role
  - To learn from experience
  - To develop emergency training programs at national and sub-national levels

This Unit has to organise itself and to contribute to the national arrangements in the overall context of public safety and sustainable development. It is advisable to regroup all functions usually scattered in different departments of the MOH into one single Unit or Department. The complementary strategy to the regrouping is the integration strategy (for those functions that cannot or should not be regrouped in this Unit). The regrouping should be done according to criteria such as the following[7]:

- Potential synergy of the various functions within the Unit
- Complementarities of the functions and empowerment of the activities necessary to fulfill each function
- Resources needed: as much as possible the functions regrouped into the Unit should require the presence and/or the mobilization of resources that are specific to that Unit
- The requirement of skilled staff expert in the technical fields of each function
- The development of homogeneous programs under the responsibility of functional units
- The possibility of internal coordination between the various programs
- The logical chain of command of the programs and activities

[5] This Unit should be developed in the context of Risk Management Cycle, see annex 1

[6] Source : PAHO

[7] WHO Report, STC in Yemen, November 2005

- Promotion of integration strategy with the other departments of the MOH in order to share information, to use as efficiently as possible the available resources, to prepare and to strengthen them
- Logical grouping of activities and programs as part of the overall concept of networking of the various partners of the different sectors and ministries necessary to efficiently manage the emergencies in the country.

In many developing countries the function of emergency preparedness process does not exist in the MOH as a well identified body. Unfortunately when this function exists it is too often an insolated and rarely used function. This leads to poor preparedness with little sustainability of the efforts as a contribution to capacity building of the health sector. The management of mass casualty (MCM) situations is a good case study for discussing this aspect. The wording disaster unit is unfortunate and should no longer be used. The experts of the « disaster unit » of the MoH usually concentrate exclusively on disasters and do not want to consider more common situations for which the EMS are a key component of the response. It is improbable that a health sector can develop preparedness for managing major crises if it is not in a position to already manage more common and limited emergencies. The management of major crises should be developed on an existing platform of capacities and capabilities. **The integration strategy is a logical approach that allow for a more effective integration of all functions that are necessary to manage more common emergencies and major emergencies and crisis**. A common error is to dissociate (development of systems in parallel with no coordination of the programs) the 3 situations: common emergencies, mass casualty situations with a limited number of victims and major emergencies with hundreds of victims.

In the MCM case study the situation can be summarized as the coordination of the management of resources, of the management of patients, and of the management of the systems which includes management of information. The Emergency Medical Services (EMS) are just one component of the broader concept of EMS System (EMSS)[8] necessary to ensure public safety in crises. This EMS System[9] includes partners from other sectors such as first responder (police, rescue….) , the coordination mechanisms, the development of sectoral and intersectoral plans, the selection of shared strategies, the development of cross-fertilizing training programs among involved agencies, the development of community based educational and training programs, etc.

It is a myth to think that a central national « disaster unit » will be in a position to manage the response in every emergency. In most of the cases the emergencies such as MC situations are managed by the local level provided the mobilization of extra-resources and the coordination of the available resources with other neighboring institutions and communities. In these rather frequent emergencies the central level is too far from the scene, to slow to act and does not have the technical and logistical capacity to efficiently manage the local response. In small countries the central level can manage such situations (heavy centralization). In big countries the management of public health is mainly a provincial matter. The departments of health of provinces are

[8] Strategy & Recommendations in Organizing & Managing EMS in daily emergencies and disasters. ADPC, 2005.

[9] Emergency Medical Services Systems Development. PAHO Publication, 2004.

often more powerful than the MOH itself. The recent workshop of WPRO[10] in Manila has highlighted the necessity to empower as much as possible the local capacity. For instance in big countries such as the Philippines or Pakistan the situation is different in its very nature from small countries from the managerial point of view and the potential roles of the central level versus the local levels. The national level (disaster Unit) has always a role to play but not necessarily to manage, control, command and supervise the response. In major crisis the central level has a key role to manage international assistance in cooperation with the local level, to manage specific threats or to provide specific expertise. Synergy and complementarities between the central and the local levels are presented in tale1.

Policy - guidelines – standards – community plans and role of the MOH

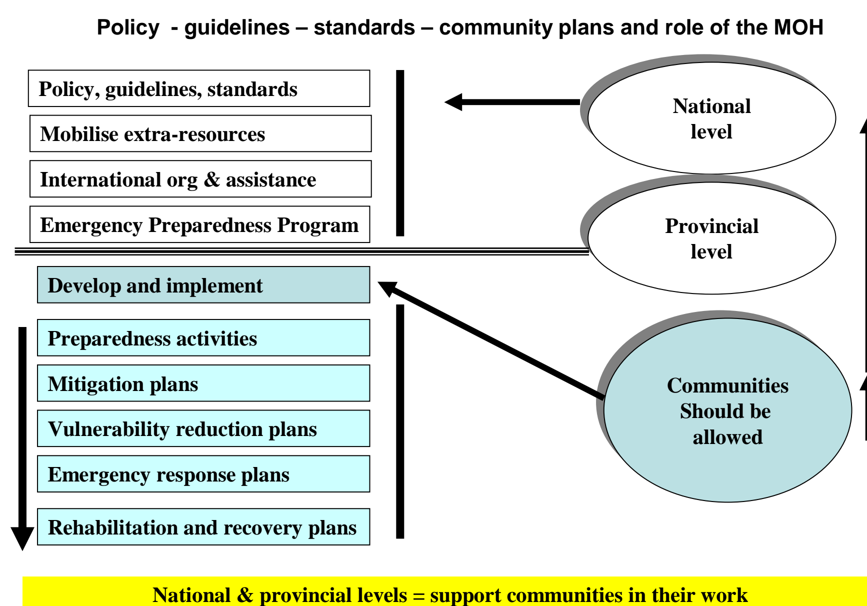


Table 1

The integration strategy within the MOH and the surge capacity

This strategy consists of two complementary core concepts:

- The identification of those existing services that will have to contribute to mitigate, to respond to and to recover from major emergencies and their strengthening for providing adequate and timely activities in case of emergencies and disasters. The notion of strengthening includes the development of the capacity and the capabilities of the existing services to become active actors during major emergencies in all technical fields that require the assistance from the central level. This strategy leads to sustainability through institutionalization of the preparedness process in a logical sequence of development type in its very nature. For instance the epidemiology unit of the MoH can be prepared and strengthened if necessary in order to be in charge of rapid health needs assessment or to contribute to the set up of surveillance system and monitoring activities in major emergencies. The « Emergency Preparedness and Management Unit » of the MoH has a pivotal role to play in this strengthening process and should be the leading

[10] Informal workshop on the management of mass casualty situations, January 2006.

agency of the health sector for promoting the safe implementation of the integration strategy. At the national level the strategy also includes efforts to integrate the efforts of the MOH into the context of the multi-sectoral approach of public safety management. WHO Regional Offices should mirror these national efforts in integrating different programs in a pragmatic approach (VIP, Disease Control, etc.) at Regional level. The goal is to empower the MOH in order to enhance its capacity and its capability to fulfill its guidance and normative role, to manage the activities that require national intervention.

- The equivalent strengthening of the sub-national services of the health department up to the institutional level. This capacity building process is best managed in the overall context of public safety also at sub-national levels. For instance the Emergency Departments of the hospitals are an important component of the EMS System. They are developed within the conceptual framework of public safety (cooperation with the other sectors, first responder…). Hospitals are not isolated islands. Hospitals emergency plans, including contingency plans, are developed into the continuum of the logical sequence of activities and not as an independent activity. Risk identification, vulnerability reduction and hazard mitigation should be a routine activity in hospital to deal with common and almost daily situations. The strengthening (which includes also the development of special mechanisms, procedures, and plans) of these routine activities will allow for the mobilization of existing and extra resources as required by the situation. Each hospital should appoint a risk manager who will follow up all activities linked to emergency preparedness. The continuity of essential hospital services, the HEICS, the SERPs are best developed in the context of public safety.

The surge capacity in many essential services for the management of public health in disasters (from surge capacity in epidemiology and surveillance, in DANA, in response, mitigation etc.) is a critical component of the preparedness process. The integration strategy directly contributes to enhance the surge capacity of agencies, of services, and of the MOH. The institutionalization of these mechanisms through the integration strategy contributes substantially to the sustainability of the preparedness process and its contribution to development.

Training programs for Emergency Preparedness

Training programs together with the institutionalized management of resources and coordination mechanisms are of vital importance to promote preparedness and to ensure sustainability. These programs are best developed when they are designed according to a logical, integrated, multisectoral, and multidisciplinary effort. The overall context is public safety and the management of public health in emergencies and disasters. Whether the programs target public, municipality and community based agencies such as fire brigades, ambulance services, police, or health sector services, the integration strategy requires the existence of an empowered specific unit within the MoH in charge of developing, monitoring and organizing the training activities necessary to anticipate, respond to and recover from major emergencies. Some of these training activities are conducted at national level, some at local levels. There is a tendency to think that the adoption of existing templates (such as for hospital emergency plans) is an efficient solution. This approach will never lead to sustainability and will not empower the communities and their agencies in developing

countries. Much more useful is the strategy of promoting the capacity of managing emergency preparedness as a process. Templates are not more than just one output of the process. Each community has to develop its own templates according to their context and organization. The integration strategy also focuses on the process itself as a tool for achieving the goal. WHO Regional Offices are in a key position to assist the MOH to develop these training activities and to organize regional networks of national training programs, including regional training courses (TOT). In training the sharing of pedagogic material and of training experience is of paramount importance.

Recommendations for the management of public health in major emergencies, crisis and the positive contribution to safer communities

1. To broaden the concept of Emergency Preparedness activities (EP). **Emergency Preparedness Programs & Process (EPPP)** is broader than the limited concept of EP activities aimed at only enhancing readiness to respond to crisis. The EPPP should be developed in the overall context of **public safety.** The ultimate goal is the capacity building in the management of public health in crisis as a continuum from prevention and mitigation to response and recovery. The context is multi-sectoral. The best adapted framework is **Community Based Risk Management.** The **surge capacity** in the management of public health in crisis is of paramount importance. The **integration strategy** directly contributes to the enhancement and the institutionalization of this surge capacity and to the integration of various services as a direct contribution to **sustainable development**.

2. To promote **decentralization** of authority and responsibilities to the sanitary regions (provinces, etc.) in order to develop community based risk management capacity (which ultimately includes also vulnerability reduction, mitigation, response and recovery). Decentralization process can be hazardous if:
   - not preceded by the building of local management capacity
   - not accompanied by the corresponding transfer of national resources (if not already present at the decentralized level) and authority
   - not accompanied by regulations, laws, policy and guidelines for implementing that policy
   - **not accompanied by the institutional strengthening of the MoH**

3. The development of emergency preparedness programs and activities should be based on:
   - **Evidence based emergency planning**. Too often the plans are developed out of the reality context for information on risk, hazards, vulnerabilities and resilience are not considered in their full dimension. Templates will never replace the planning process.
   - **Context based programs** aimed at enhancing the capacity of the communities to manage public health issues in emergencies and crisis
   - **Logical frameworks of activities**. Current activities should have an obvious relationship with previous and with future plans, especially in term of linking vulnerability reduction, mitigation and emergency preparedness with development
   - Emergency preparedness process should as much as possible **link together response capacity and sustainable development through the enhancement of integration strategy**

4. **WHO Regional Offices** have a pivotal role to play in supporting the countries to develop their capacity and capability in EPPP, especially through supporting **training activities** and by the creation of **regional forum** where :
   - **Trainers** can share experience and pedagogic material

- **Managers** can share experience and lessons learned, especially for MCM
- **Strategic approaches** can be defined so as to strengthen the regional capacity for cooperation and coordination

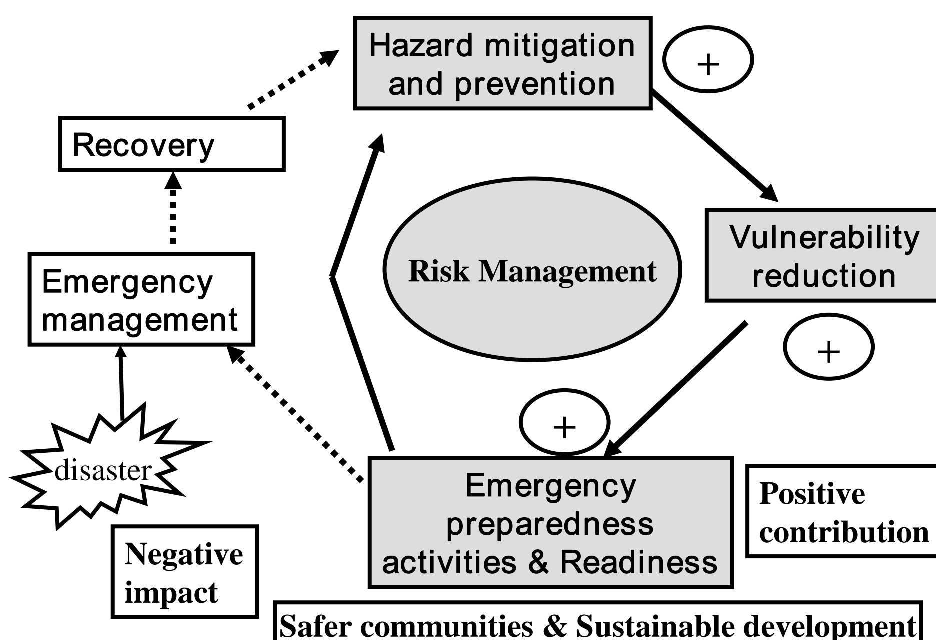
In some situations the RO can have a more direct role to play in the management of some elements of the response in crisis or of the recovery process. The surge capacity of the RO is a central element.

5. **WHO HAC** has a pivotal role to play in supporting the Regional Offices through **harmonization of conceptual frameworks, guidance and normative activities, technical support, and publications of standards and best practices** in :
   - Policy making and programming
   - Risk management practices and public health in emergencies
   - Emergency planning processes and programming
   - Vulnerability reduction, hazard mitigation, response and recovery processes
   - International assistance and cooperation

   WHO HAC has also a role to play in backing up WHO RO in their direct support of MOH in the management of some activities in case of crisis if needs are present. In this context the enhancement of the surge capacity of HAC is a critical issue. Institutionalization of the surge capacity of WHO HAC and WHO RO will benefit of the adoption of the integration strategy within the Institution at all levels as a mirror of the integration strategy within the MOH.

ANNEX 1

SUSTAINABLE DEVELOPMENT AND RISK MANAGEMENT[11]



Comments

- The traditionally so called « disaster cycle » is not relevant and not conductive to capacity building for safer communities. In this model disaster is presented as a necessary step for going on on the cycle/ does not promote sustainable development out of the presence of « disaster » component, etc.
- The natural loop/cycle is therefore the **Risk Management cycle. It is a spiral process that is going on even in the absence of a disaster**. It is a comprehensive strategic framework: hazard mitigation/prevention/ vulnerability reduction/ emergency preparedness, readiness
- Sustainable development requires strategic approaches among them the promotion of safer community which is the final output of the risk management process together with the capacity to adequately manage emergencies and disasters when they occur.
- Safer communities is a framework more complex than just the security aspects
- Hazard mitigation and prevention target risk
- Vulnerability reduction targets communities (community is composed of people, property, services, environment and assets)
- Emergency preparedness activities targets agencies and institutions having a role to play in the response and relief. One of the outputs of emergency preparedness programs is an increased level of readiness to respond to and recover from an emergency/disaster. Emergency preparedness process is a long-lasting, multi-sectoral activity, of development-type (policy, plans, strategies, arrangements, procedures, etc…)

[11] Developed by the Public Health Team of the Asian Disaster Preparedness Center in 2004 for the WHO and UNDP training course: Disaster and Development.

- Emergency management occurs (implemented according to the level of readiness) when it becomes necessary to manage the emergency situation created by a disaster. It includes relief, response, rehabilitation and recovery.
- Disaster is not an integral part of the normal cycle of risk management but is an « exceptional and transitory » situation that has to be managed so as to recover fully, which means to re-enter the normal risk management cycle (this is not the mere return to the previous level of development but hopefully to an increased level of development just because the previous level did allow the disaster to happen. Hopefully the recovery process will lead to better hazard mitigation process, to more efficient vulnerability reduction and increased level of readiness)
- Disasters do not « stop » development but have a negative impact on development
- Risk management will reduce the number of disasters
- Development can create new risks
- Management of major emergencies and crisis requires the institutionalization of the function « emergency preparedness and management » within the MOH
- Many emergencies (e.g. mass casualty events) are usually managed by sub-national bodies. The integration strategy aims at enhancing the synergy and the complementarities between the existing services within the MOH, between sectors and between the various levels.