The disaster reduction process has to be discussed within the conceptual framework of Community Based Disaster Risk Management. It is a conceptual framework that defines a set of measures for ensuring the general safety of communities; these measures are hazard prevention, hazard mitigation, vulnerability reduction, and emergency preparedness, which include response and recovery process. The Goal of CBDRM is to protect public safety, which includes safe environment, access to adequate health care, protection from threats, etc. The Objectives of CBRM are:

- Identifying threats to public safety
- Reducing the risks arising from those threats
- Responding to and recovering from public safety emergencies
- Outputs: Risk reduction plan, which includes Mitigation, Emergency response plan and Recovery plan

The health sector has a key role to play in this risk reduction and risk management processes, which will ultimately contribute to disaster reduction and to enhancing sustainable development. The health sector has to develop its activities within the global multi-sectoral effort so as to:

- Increase the efficiency and the integration of the agencies composing the health sector into the overall organization of the emergency management process at strategic level, tactic level and operational level
- Optimal use of available resources. Many resources and services are provided by other sectors than the health sector to contribute to reduce disasters and their consequences on health. This implies strong coordination mechanisms and cooperation arrangements
- Selection & implementation of the most adapted risk treatment options in the response and the recovery phases
- To increase the overall efficiency of the planning process and the vulnerability analysis process & risk reduction process
- Contri bute to overall mitigation efforts
- To ensure complementarities and synergy of the various plans
- To increase readiness to respond to and to recover from, especially of those agencies of the health sector dealing with mass casualty and public health
- To increase awareness at all levels and of all stakeholders

The disaster reduction process is a complex process that requires a comprehensive approach from the health sector. This means that the health sector has to develop its strategy so as to ensure that the strategic principles of risk management are translated into actual programs, plans, policies and guidelines for the safe implementation of these policies. Basically this requires that the following strategic disaster reduction approach is adopted:

- All hazard approach (too often the health authorities consider only a limited number of hazards and no systematic assessment is done to prepare for
« unexpected » hazards. The last tsunami is an illustration of this attitude. This approach is necessary to develop efficient mitigation strategy

- **Inter-sectoral cooperation** (too often the health sector develops its mechanisms in isolation from the other sectors. This is true not only for prevention but also for response).

- **Prepared community** (public education, plans, programs, systems, arrangements, etc.) Too often the educational component is neglected. Mitigation is an activity that takes place mainly at community level (for instance earthquake resistant hospitals, retrofitting of those vulnerables)

- **Holistic strategy**: prevention, mitigation, response and recovery are integrated. Too often the focus is on response only

- **Intra-sectoral coordination and synergy of the various programs.** Too often the various vertical programs do not interact as a component of a network

### Mitigation

Can be carried out before, during or after an event. It is recommended to define a « national framework for disaster mitigation »: measures taken in advance for a hazardous event which are aimed at decreasing or eliminating its impact on society and environment ». This means that prevention is included in disaster mitigation plan!

Disaster mitigation measures act by:

- Lessening the hazards
- Reducing the vulnerability of a community to the hazard
- Or changing the environment in which hazards and communities interact
- A rigorous and systematic risk management process will help communities to identify the most cost-effective combination of measures for the range of risks which they face. The plan of action for disaster mitigation will rest on priorities determined by the community and stakeholders.

The well known formula (risk is a function of hazard X vulnerabilities/readiness) is useful to define the contribution of the health sector to the reduction of the consequences of disasters. There is no disaster if there is not a threat that interacts with preexisting vulnerabilities within the community. The health sector can develop strategies aimed at decreasing or buffering vulnerabilities, at increasing its readiness as well the readiness of the communities and at mitigating the threat likelihood and its consequences. This strategic approach is necessary to developing and integrating the various programs and plans and to more efficiently linking them with sustainable development. The ultimate goal of disaster reduction efforts of the health sector is to positively contribute to the sustainable development process. This formula tells us that mitigation, prevention are essential components of the overall strategy of disaster reduction. Response and readiness are only one component.

Here (slide below reproduced) are some examples of the application of the formula presented in the previous slide. It is important to realize that it is almost impossible to reduce disasters to happen but it is possible to reduce the consequences of the disasters and to mitigate the impact. Here are some elements that will contribute to the reduction of the consequences of the disasters and their impact on health if they are handled adequately. This means not only focusing on response but also integrating mitigation measures.
The contribution of the health sector to disaster reduction should also include the millennium development goals as defined by the UN. In deed the concept of disaster includes not only sudden dramatic events as presented in this slide but also slow onset situations such as drought or on-going situations such as extreme poverty. As an illustration the decrease of dead and injuries will require safer hospitals, efficient inter-sectoral coordination and cooperation, development of plans and procedures.

- Decrease the numbers of deaths and injuries
- Anticipate population displacements
- Surveillance for new cases of disease and disability
- Management and prevention of increased numbers of cases of psychological and social behaviour disorders
- Plan for possible food shortages and nutritional deficiencies;
- Monitor for disease from environmental health hazards
- Mitigate for damage to health facilities and other infrastructure;
- Anticipate disruption to routine health services
- Anticipate disruption to routine disease surveillance and control services
- Avoid diversion of development resources to emergency relief
- Avoid diversion of capital investment funds to the rehabilitation or reconstruction of essential infrastructure

Health sector role in Preparedness and mitigation

It has long been appreciated that the health sector has a role in emergency preparedness. Many countries have emergency preparedness units in the ministry of health and most of them are quite active, though usually poorly resourced. Not only should their responsibility include training and resource management, but also policies, plans and procedures need to be developed for all relevant technical and administrative programmes of the health sector such as trauma management, disease surveillance, epidemic control, water and sanitation programmes, laboratory services (surveillance, pathology, forensic services), psychology services, vaccinations, nutrition, vector control, disability care, public awareness and information, and the general support services (supplies, transport, personnel, communications).

However, it is not much appreciated that the health sector also has a role to play in vulnerability reduction. A strong national and international effort has to be done for enhancing health sector capacity and capability to more actively contribute to vulnerability reduction, mainly in developing mitigation strategy. This component of the formula previously discussed is a key issue that must be give more attention in the future.

In conclusions

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Community Based Disaster Risk Management is a fundamental component of sustainable human development. It addresses factors which impede or retard development. The health sector is a key partner in community based disaster risk management because so many of the effects of a hazard have a direct impact on health and because many of the causes of vulnerability can be addressed through health sector development programmes. The health sector was the first to take an organised approach to emergency management and has given the emergency management
community many of the concepts and tools that they use. The integration strategy is of paramount importance. It means using as much as possible the existing services and programs within the health sector and strengthening them so that they can match the extra load and the specific needs created by disasters. Response is just one component. Mitigation is another component, which is more powerful for promoting sustainable development and reducing losses due to disaster impacts.

Emergency management capability is a basic need in any community but it is often a neglected component of public health systems. For public health to achieve its full expression, policy makers need to encourage and empower local health staff to play an active role in community initiatives to reduce risk and protect development.

THANK YOU