

Disaster Risk Reduction

AHI M2

Extreme Environment Risk and vulnerability

UPEC

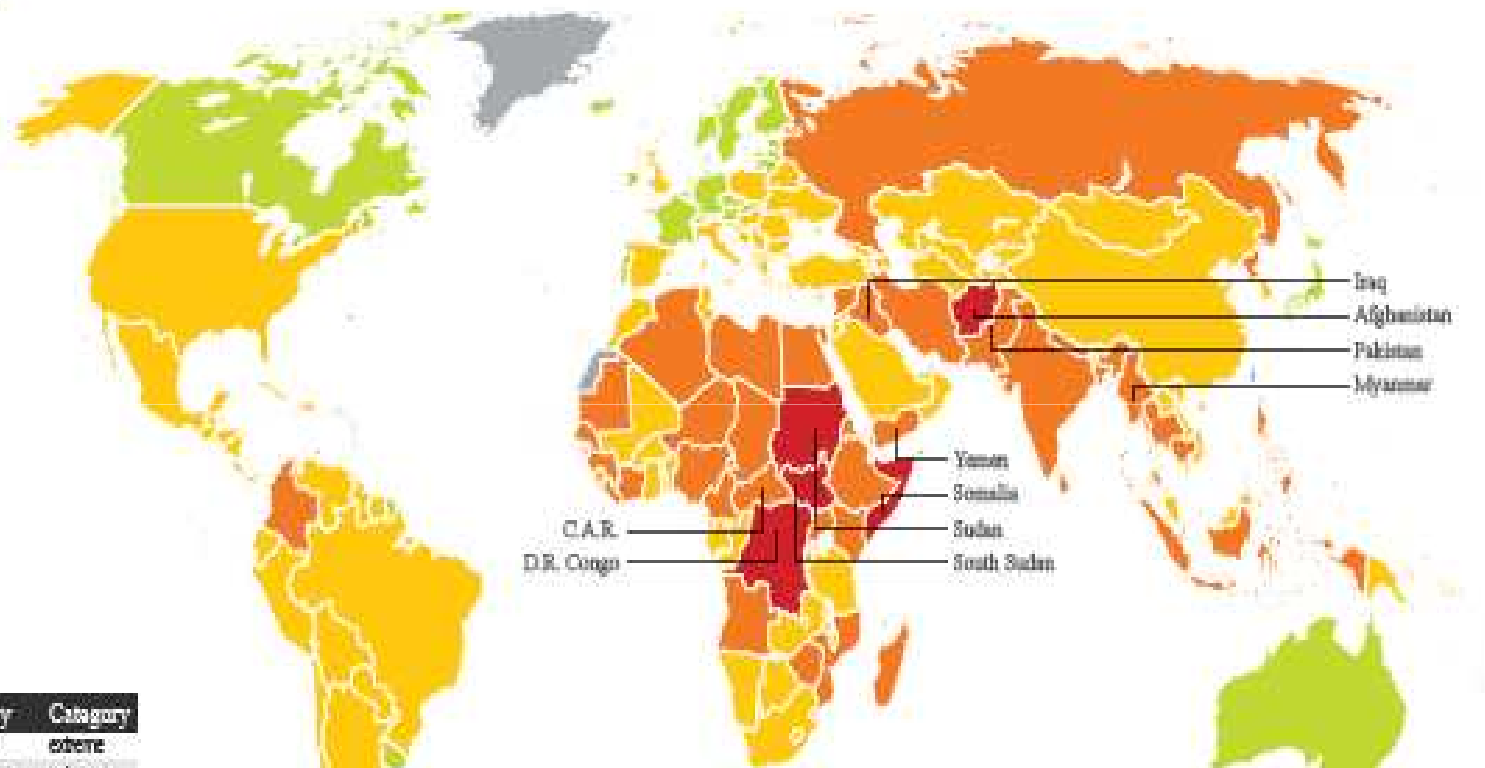
University of Creteil - Paris XII

Aloysius John
March 2012

Introduction

- There is growing international concern at the present frequency and magnitude of the natural hazards, which are often results of climate change . Before such events the international humanitarian agencies are focusing their attention on putting in place policies, legal, technical, financial and institutional measures that will reduce the destructive effects on the lives and livelihoods of individuals and communities .
- There is a paradigm shift from reactive emergency relief (which nonetheless remains important) to pro-active disaster risk reduction (DRR) in the pre-disaster stages by strengthening prevention, mitigation and preparedness.
- In order to achieve this emphasis is put on the Disaster Risk Management which is integrated into the organizational systems, in order to prevent and mitigate the effects of the disasters that affect the most vulnerable communities.
- Hyogo Framework Analysis gives clear indication on the systematization of DRR and mainstreaming them into the Development Programs

- Extreme risk ■
- High risk ■
- Medium risk ■
- Low risk ■
- No Data ■



Rank	Country	Category
1	Somalia	extreme
2	DR Congo	extreme
3	South Sudan	extreme
4	Sudan	extreme
5	Afghanistan	extreme
6	Pakistan	high
7	C.A.R.	high
8	Iraq	high
9	Myanmar	high
10	Yemen	high

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Since the years 90s, an average of 58000 people die every year and more than 225million are affected.

In 2005, More than 92,000 are estimated to be killed in about a total of 150 disasters that happened in the world during this period.

Africa and Asia are the worst affected. 88% of the death and 96% affected.

26 Décembre 2004: The tsunami in Asia was a major disaster.

29-30 Aout 2005: The Hurricane Katarina caused floods in New Orleans

8 October 2005: The Kashmir Earthquake in Pakistan

12 Janvier 2010: Haiti Earthquake

Juillet/Aout 2010: Historical floods in Pakistan

Major disasters 2000-2010

Year	Disaster	Country	Death	Affected	Total damage
26.01.01	Gujarat	India	20000	6300000	2,6
11.8.02	Dresden floods	Germany	27	330108	11,6
26.12.03	Bam	Iran	27000	270000	0,5
26.12.04	Tsunami-Asia	Asia	226408	235000	9,2
26.07.05	Mumbai floods	India	1200	20000000	3,3
29.08.05	Katirina	US	1900	500000	125
8.10.05	Kashmir EQ	Pakistan	74000	5500000	5,2
27.05.06	Yogyakarta-EQ	Indonésia	5900	3200000	3,1
2.5.08	Cyclone Nargis	Myanmar	140000	2500000	4
12.05.08	Sichuan EQ	China	88000	45000000	85
12.01.10	Haiti EQ	Haitie	222600	3400000	
			807035	87235108	249,5



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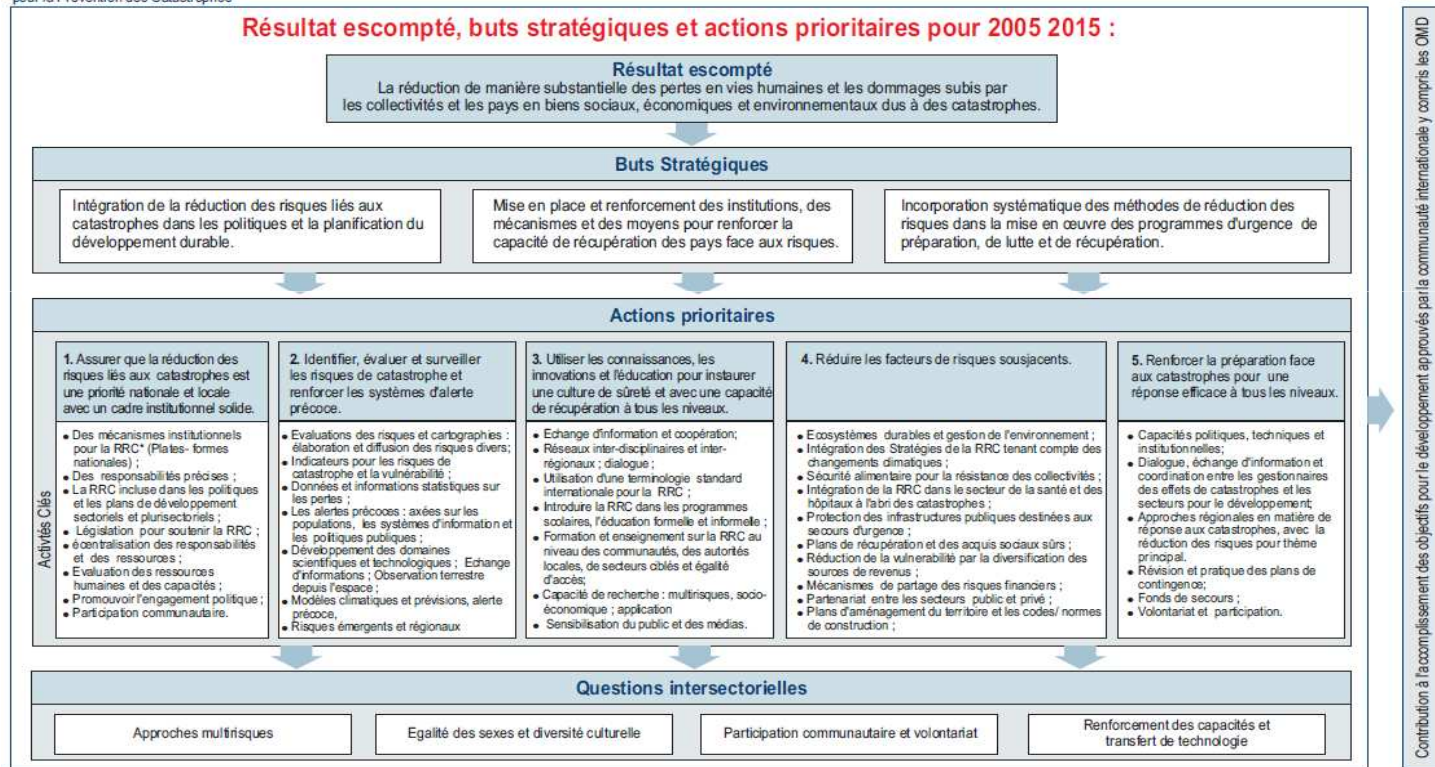
What is DRR

- In the early 90s, one of the major crisis that happened in Asia was the Bangladesh tidal waves. It was a major disaster at that period, with more than 250000 peoples losing their lives and many tens of thousands left homeless. It was also a turning point in the disaster response.
- At that time, the concern was how to prepare the people to be ready for confronting future disaster situation. Cyclone shelters were built, simple early warning through radio was introduced and people received radios
- Later, the Latur earthquake in India followed by the Orissa supercyclone clearly oriented the reflection not only in terms of Disaster Management, but integrated the concept of Disaster Preparedness (DP).
- When the development programs became more and more community oriented, the concept evolved into Community Based Disaster Preparedness (CBDP). This was integrated into the normal development activities in India and Sri Lanka, Philippines and Pakistan by preparing the vulnerable communities for future disasters.
- After the Tsunami and Kashmir earthquake disasters, the concept further evolved into Disaster Risk Reduction. The DRR is a concept borrowed from the Disaster Recovery plan that came to be prominent in the corporate sector after the September 11 attack, wherein companies lost their business due to loss of data.
- DRR is more and more systematized in the humanitarian sector and it is getting to be part of the regular development process. Once the recovery period is over, the activities protract into the Risk reduction process through risk and vulnerability analysis in order to reduce the impact of future hazards, building awareness among the people on preventive measures, Elaboration of policies in order to be more effective with the most vulnerable groups.
- It is evident today that even the governments have taken up the DRR as a policy issue in order to minimise the impact of the risk caused by the disasters.

Cadre d'action de Hyogo



RESUME du Cadre d'Action de Hyogo (CAH) pour 2005-2015: Pour des nations et des collectivités résilientes face aux catastrophes



Hazards, Disasters, DRR

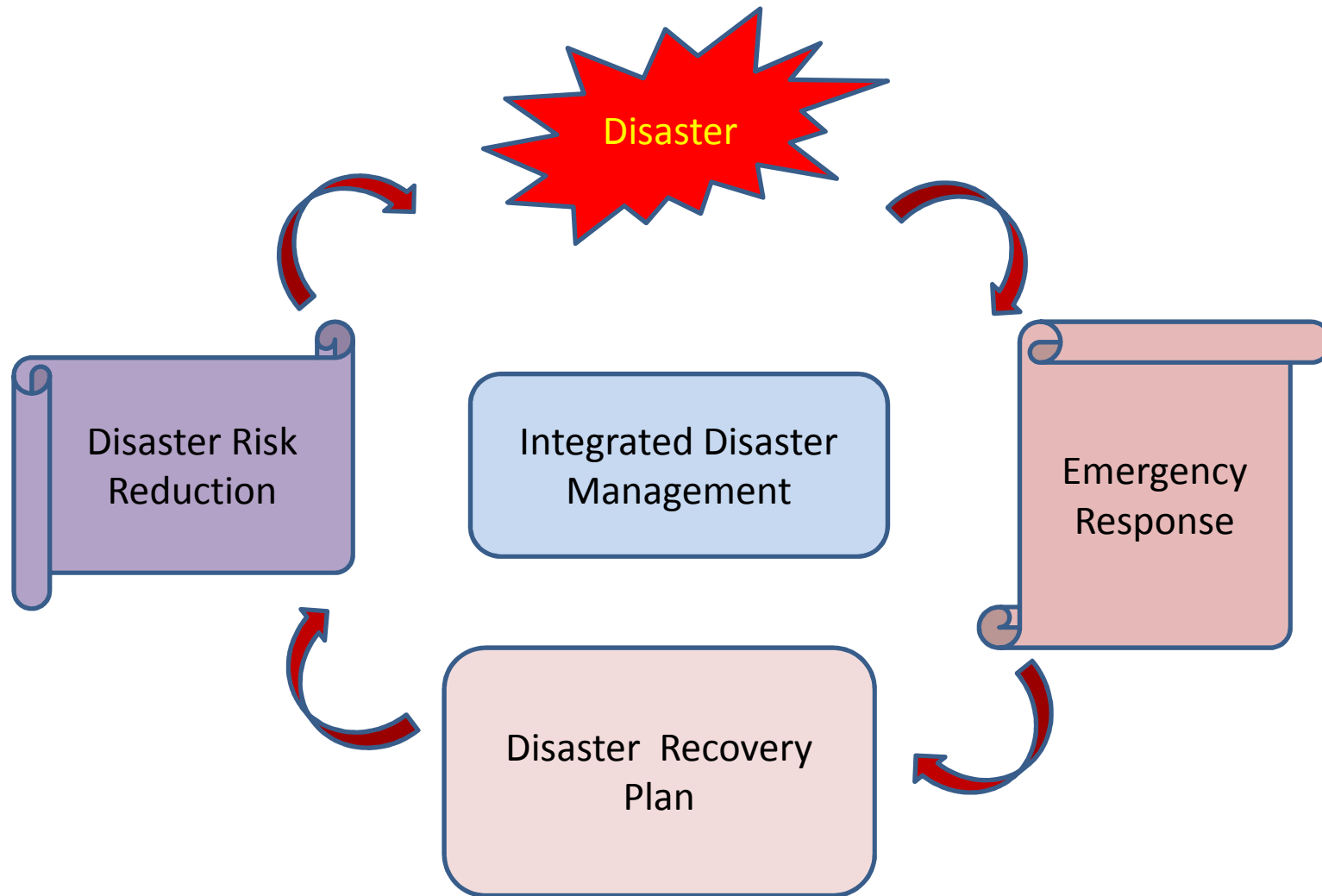
- Disasters are results of the impact of hazards on communities and households, bringing about temporary destruction or permanent destruction on them, in particular the livelihood security of their members.
- Disaster is the result of the combination of many factors : hazard risk conditions, vulnerabilities, the resilience of the victims before such events.
- The understanding of the vulnerability and the resilience of the communities is a means to probe into devising ways and means to enhance the positive capacities of the people to face such situations or the impact of the hazards.
- **Disaster Risk Reduction (DRR)** can be defined as the steps to be taken to minimize vulnerabilities and disaster risks, limit the impact (mitigation and preparedness) and if possible prevent exposure to the adverse impacts of hazards by integrating preventive measure in the context of sustainable development.
- **Disaster Risk Management (DRM)** is a process that goes beyond the scope of DRR in the sense that it includes a management perspective combining the prevention, mitigation and preparedness.

Integrated Disaster Risk Management

- **Integrated Disaster Management (IDM)** is a process that goes beyond the Emergency Response when a disaster happens.
- At the time of Disaster, a global intervention logic is initiated and this consists of :
 - An immediate emergency Response
 - A recovery plan with immediate and long term recovery actions
 - And in major disasters, a reflection on future disaster recovery plan, a another disaster happens
 - Disaster risk reduction activities to reduce the impact of future disasters.
- This process goes beyond the continuum and contiguous process of the disaster response.

Disaster Risk Management Cycle

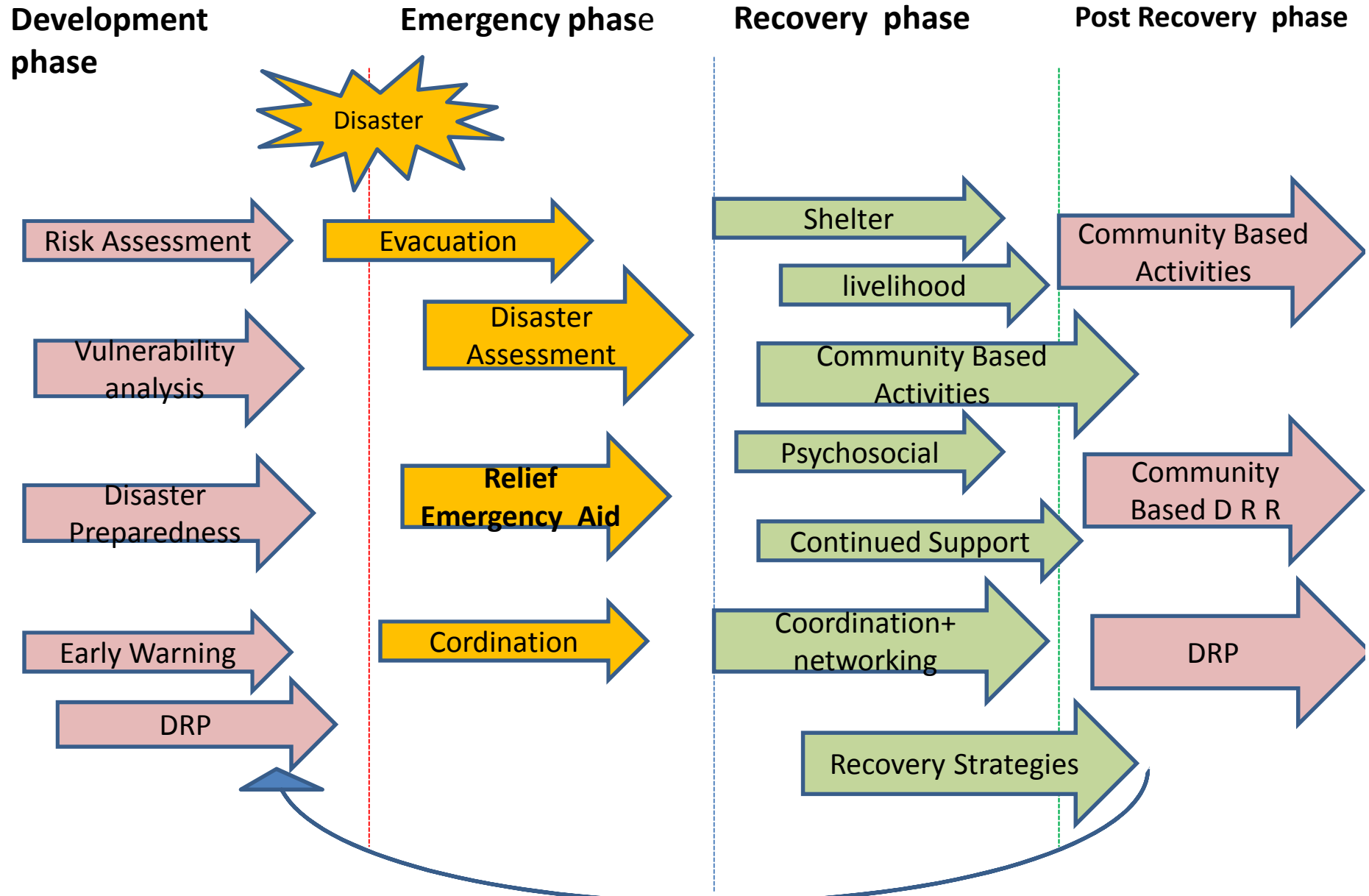
Conceptual approach



Analysis of the Tsunami -2004 Disaster Response

- Due to the complex and compound nature of the disaster, the response had to be carried out in different phases. We can identify four phases :
 - The emergency –Crisis Response
 - The post crisis-recovery situation
 - The recovery phase
 - The development phase wherein the DRR and the DRP are systematized and mainstreamed into the development programs.
- As shown in the following schema, the development phase is the most crucial moment to prevent and mitigate the effects of the disasters on the community. It is a community based approach and the organization must consider this as a priority.

Analysis of the Tsunami -2004 Disaster Response in Asia



Disaster Response to Disaster Risk Management Conceptualization of the practice into a Process

The tsunami experience in Asia highlights the need for a systematic integral approach right from the beginning. The response has to be in stages and each stage is interlinked and leads to activities in the following stage. (Cf schema in slide 15)

1.0 is the crisis stage and everything must be carried out in order to reduce the Critical objective time. In order to achieve this A1 gives the different activities that need to be carried out. This means the implementing organization must be able to organize itself or it must be empowered to carry out these activities.

2.0 is the Recovery stage. If activities in 1.0 are carried out effectively, they will lead to 2.0 stage, which is the recovery stage. Here the population must be empowered towards autonomy. The activities A2 carried out are important and means must be made available to the partner.

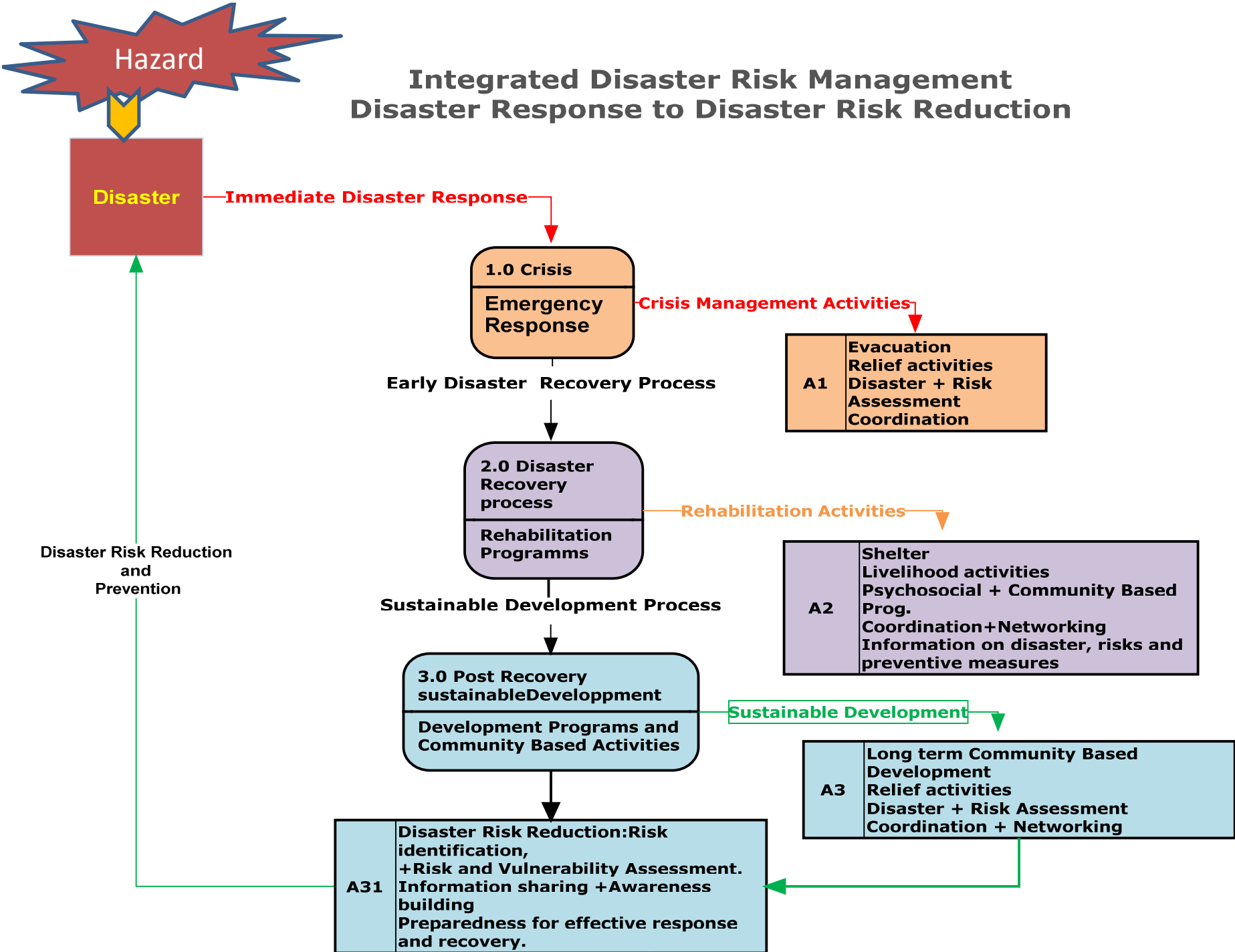
3.0 is the post recovery stage, which consists of accompanying the victims towards the development stage and community based activities and in certain extreme situations, the configuration of new communities (as in the case of tsunami or in the Kashmir earthquake). A3 indicates the different activities that are to be undertaken and implemented)

Activities in A31 lead to the Disaster preparedness and Disaster recovery plans for the future disasters.

Disaster Recovery plans are part of the future Risk reduction and mitigation plan and must be considered as such.

Integrated Disaster Risk Management

Disaster Response to Disaster Risk Reduction



Mainstreaming the DRR in the Disaster Response

The Hyogo Framework for Action was devised in 2005 in order to respond to emergency situation and go beyond the immediate response, building the people towards long term sustainability by preparing them to better confront disaster situations. (HFA was signed in 2005 following the Kobe earthquake). It puts the emphasis on :

- The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.
- The development and strengthening of institutions, mechanisms, and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards
- The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response, and recovery programs in the reconstruction of affected communities

One of the major focus of integrating DRR process in the disaster response, is the absolute importance of preparing populations at risk for the worst-case scenario. Mental preparation is just as important as physical protection. This implicitly implies :

Making disaster risk reduction a policy priority, institutional strengthening

Education, information and public awareness

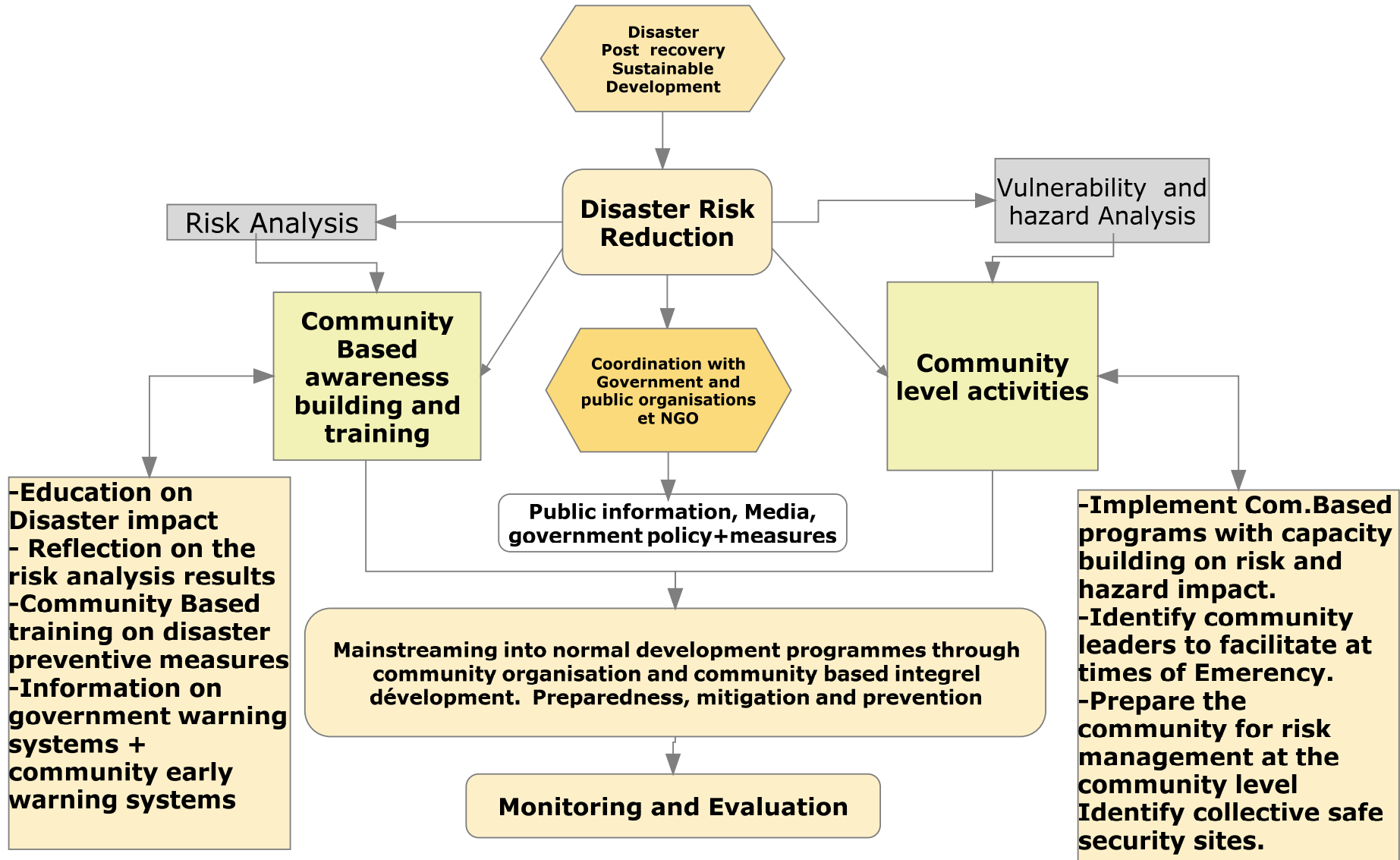
Risk assessment and early warning systems

Reducing underlying risk factors

Preparedness for effective response

Partnerships with local government organizations and with other NGO's

**Disaster Risk Reduction
Mainstreaming into the Development process**



Disaster Risk Reduction is introduced in the post emergency situation, in the recovery stage. Five parameters must be taken into account :

Risk analysis

Hazard and Vulnerability analysis

Community Based awareness building

Introduction of community level programs

Coordination with Government structures and policies ; with other NGO

Community Based awareness is a means to motivate, mobilize and encourage the beneficiaries of the emergency aid to become aware of the future risks, the right attitude towards the risks, awareness on early alert systems. Different trainings and capacity buildings are given to the communities.

At the same time different activities are introduced at the level of the communities and they target the long term sustainability of the communities by taking into consideration the vulnerability of the communities, their resilience and preparing them for a sustainable future. This is done through the building of capacities and capabilities of the poor, in particular le social capabilities.

It is also equally important to negotiate with the government and the international institutions on the policies disaster prevention policies and guidelines.

1. **Ensure** that disaster risk reduction is a national and local priority with a strong institutional basis for implementation. **This implies the capacity development** of the partners
2. **Identify, assess, and monitor** disaster risk and enhance early warning
3. **Use knowledge, innovation, and education** to build a culture of safety and resilience at all levels.
4. Use **knowledge, innovation, and education** to build a culture of safety and resilience at all levels - **Women's Views of Disaster Risk Reduction**
5. **Reduce** the underlying risk factors
6. **Strengthen disaster preparedness** for effective response at all levels

Policies and Programmes in DRR - (to be kept in mind)

- Disaster risk management master planning
- Hazards, Vulnerability and Risk Assessments
- Building urban resiliency in critical services and infrastructure
- Risk-sensitive land use planning and urban re- development (Housing, Shelter and Slum risk reduction)
- Legal and institutional arrangements for DRR
- International standards for Disaster/Emergency Management
- Indicators for Urban Resilience
- Training and capacity building

Areas of intervention

Specific gaps and challenges are identified in the following five main areas:

- (a) Governance: organizational, legal and policy frameworks;
- (b) Risk identification, assessment, monitoring and early warning;
- (c) Knowledge management and education;
- (d) Reducing underlying risk factors;
- (e) Preparedness for effective response and recovery

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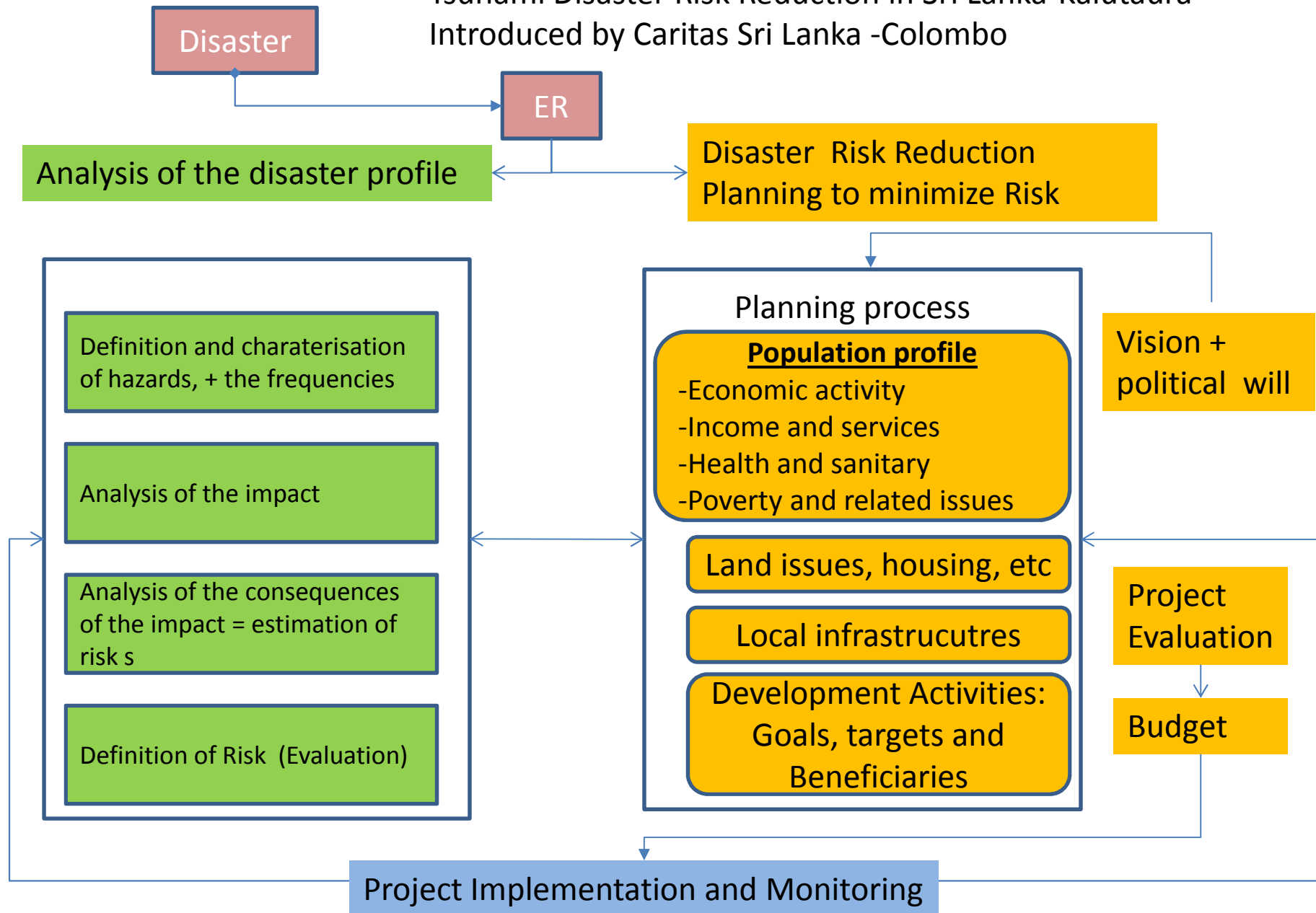
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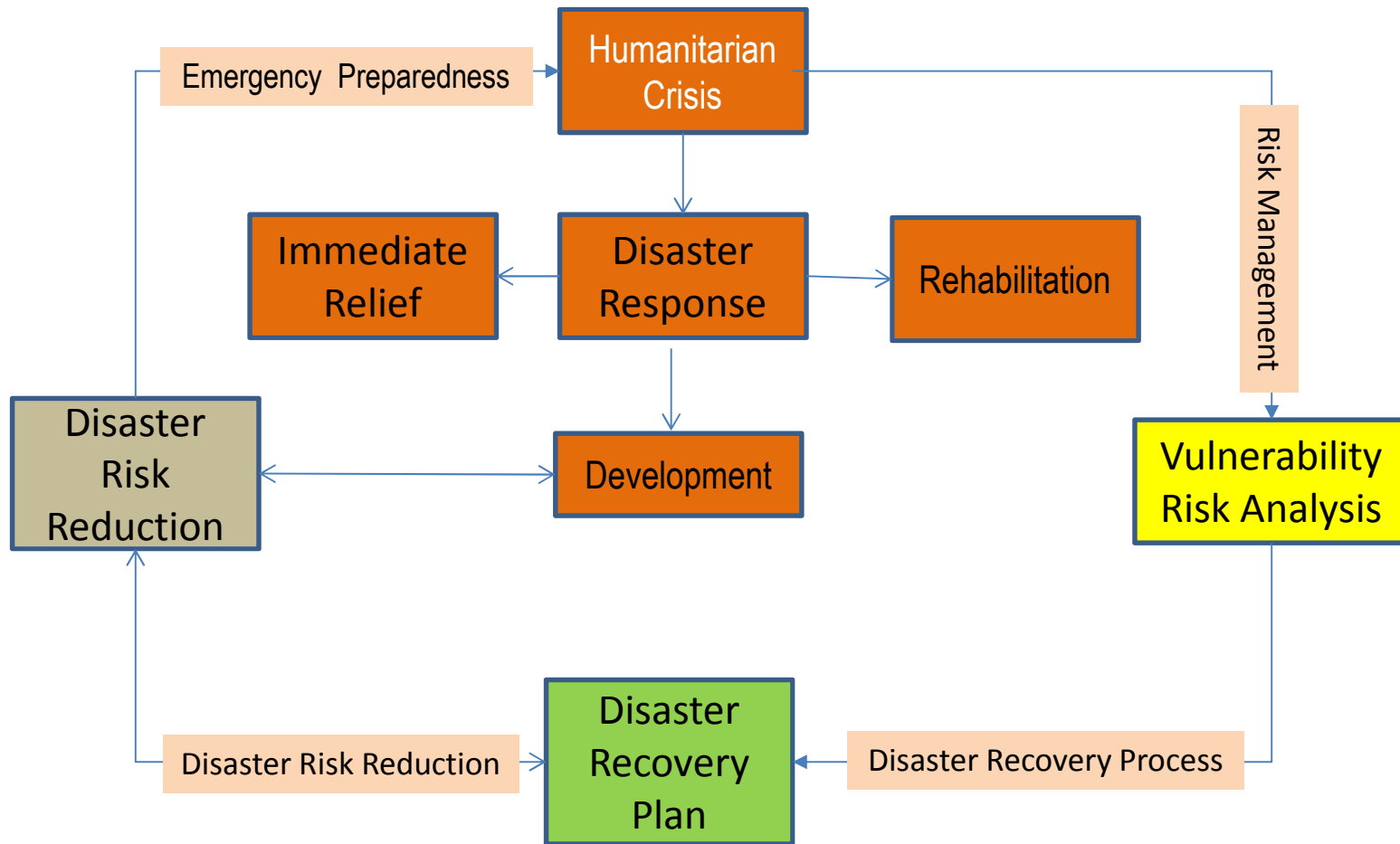
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Tsunami Disaster Risk Reduction in Sri Lanka-Kalutaura Introduced by Caritas Sri Lanka -Colombo



The Concept of Integral Disaster Risk Management



Case Study

- Cyclones and storms are frequent in south India and Pondy cherry state is highly vulnerable. In particular the Keelakudi irupu is considered to be a high risk zone, because the cyclones wipes away the huts and the poor are left without any shelter. Often they are put in schools from a very short period of time and then they go back to their houses to restart their lives again to be once again affected during the following monsoon and cyclones. Belonging to fishermen communities they do not know any other trade.
- The last cyclone in December was highly fatal, more than 300 people died and the number of shelter less was very high. People have also lost their means of livelihood and some are reduced to begging.
- The collector has decided to take drastic steps to mitigate the risk of such future disasters and is ready to undertake any activity that may go in the way of reducing the impact of the disaster. He has asked the NGO to give a Disaster management plan and your NGO is one of them which can certainly propose a relevant DRR.
- You are requested to give a Disaster Management program for this village, along with a disaster clear disaster response plan, a Disaster recovery plan, and a community based Disaster Risk Reduction program.
- The collector is asking for a pilot program which will be implemented by the organization that proposes it as the leader in close collaboration with other partners.
- What are the long term activities you propose for this village what are our strategies?