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# Yemen

## National progress report on the implementation of the Hyogo Framework for Action (2009-2011) - interim

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## Outcomes for 2007-2009

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### Area 1

*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.*

#### **Outcomes:**

Yemen has started to apply defiant polices that aimed to integrate the risk reduction practices into the development activities. Environmental Impact Assessment procedures of the development projects, Safety Standards , place safety and Labor Health regulations and other related principles are being institutionalized and applied as a component of the National development

Local government started to play their role with cooperation with the stakeholders from both public and privet sector but lack concern on DRR and they have formulated some strategies in terms of economic growth, poverty alleviation and service delivery.

### Area 2

*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.*

#### **Outcomes:**

In Yemen the voice of DRR is heard on a broad level and with thanks support from WB by Disaster Risk Management Program.And we are working on (i) disseminate preliminary findings from three ongoing risk assessment studies; (ii) develop a logical framework for risk reduction initiatives in Yemen; (iii) share international experience for effective disaster risk management institutional arrangements; (iv) develop a logical framework for risk reduction interventions and finalize priority expenditures proposed by various government agencies, as well as identify a logical sequence of subsequent activities.To add,we are working together to finalize planning for the Yemen Risk Reduction Round table scheduled to take place in New Delhi in January 20 11 that will be very benefit for Yemen to get funds to invest i DRR projects.

### Area 3

*The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.*

#### **Outcomes:**

National Maritime Oil Spell Contingency plan has been declared by the Cabinet but,with lack implementation.

UNDP ,Yemen office , has established a Disaster Management Unit (DMU) and play role in disaster preparedness,management and recovery but,not enough.

The MWE with the National Team of Environmental Emergencies and Disaster Risk reduction has developed a Nation Environmental Contingency Plan and Rapid Environmental Assessment in Disaster Guidelines in 2006 but did not see the light of day yet for fund reasons.

The national Disaster Management Plan that had prepared by Civil Defense with support from UNDP ,Yemen office ,not approved yet.

## Strategic goals

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### Area 1

*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.*

#### **Strategic Goal Statement:**

In 2008, Yemen began developing a system of disaster mitigation and recovery program funded by GFDRR . In the sustainable development plans is awareness growing gradually integration of DRR at all levels by formal and local cooperation with available but little capacities.

Legislation were enacted to regulate the general lives of, such as preventing random building in the floods and slides ,monitoring the safety measures in the technical , vocational training and public work places,

Government provides its citizens with necessary skills to curb the labor market, unemployment, poverty, and offer soft and small loans and social security for the needy funded by WB and international donors during 2007-2009 And After (tsunami) government launched a mechanism for disaster reduction and climate variability by establishment of Monitoring Centers to reduce the effects and especially after the rockslide of (Althafeer) and the Geological Survey designed a map of the hotbeds of natural hazards and the CDA Department (2007-2009) conducted advanced EWS and plans to integrate the concept of DRR in the development of the curriculum next years and has taken steps toward the utilization of risk assessment outputs from the ongoing risk assessment studies financed by GFDRR to inform policy decision makers.

MWE and EPA decided strategies for dealing with environmental and pollution disasters, and declared nature reserves and encouraged the participation of local communities and systems of self-monitoring in industrial facilities, and rationalized the demand on the natural resources, It developed environmental information systems to preserve the biodiversity and the rights of future generations.

Yemen and UNDP agreed to establish a management unit to siege disaster 2003 and the YRCS strategy 2007-2011 minimized effects of disasters emergencies and raised public awareness .

DRR and it impact is necessary to enhance national security and stability of economic growth .

### Area 2

*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.*

#### **Strategic Goal Statement:**

Shortage of possibilities made it difficult for the task of Yemen in the development of integrated mechanisms to reduce the potential environmental risks and reduce their effects, but within its limited means it developed the capacity of the government's national planning and qualified civic organizations, by participating in international activities, training courses, workshops and internal consultative meetings between stakeholders, with limited support from friendly countries and international organizations in disasters inventory and building data base to design joint scientific mechanisms to minimize the risks.

In May 2008 the MWE and the YRCS agreed to conduct of joint programs and projects aimed at strengthening the capacities of local communities in disaster risk reduction and environmental

conservation, and adaptation to climate change.

The EPA inventoried the most important natural disasters such as earthquakes devastating floods and severe droughts ,that hit Yemen during the eighties. During the period from 2000 to -2004 light earthquakes took place in some southern highlands, and the floods poured in some valleys like the valley of Moore, and Hadramout and caused damages.

Oil spills cause potential risks , while the large population centers are lacking a single comprehensive plan to manage solid waste.

The rehabilitation of the natural resources damages that caused by ( Tsunami) on the coastal area is advised to conduct a scientific study to determine the long-term effects.

The application of Building Code resistant to the impact of earthquakes and volcanoes in all regions of Yemen, in addition to using zoning maps of seismic and volcanic activity and public and comprehensive awareness campaigns from seismic hazards.

The DRMU of the UNDP and CDA in partnership with national and international civil society groups has been building local administrations and communities capacities which will help their full integration of risk and disaster management cycle.

### **Area 3**

*The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.*

#### **Strategic Goal Statement:**

Yemen has adopted in this aspect mechanisms for the implementation of environmental management plans, but it had neglected the post-disaster recovery programs. As the institutional frameworks and policies listed in this aspect is fragile, because of not adopting budgets and cost burden required to implement and expand the scope of work at the local and national levels. Therefore, Yemen is still in the first steps to achieve these principles, which will be achieved with increased awareness and finding resources of funding so, the EPA suggested to support the central and local authorities to prepare national and local plans for protecting the coastal areas from natural disasters; and strengthening the role of the GDEED to implement its role, including assessment and coordination between the representatives at the local communities, the rural development projects and local associations of fishermen and local players offer opportunities to develop programs at the local level for GDEED . Communities need to develop a culture and flexibility through the training.

SVOC proposed the creation of networks of seismic and volcanic monitoring to cover the whole country, and production of seismic maps and public awareness programs and codes of earthquakes and volcanoes. The YRCS adopt an emergency plan based on self-evaluation of the effectiveness of emergency response to disasters, and provided relevant information on DRR. and the map of community risk.

UNDP recommends to improve capacities of the CDA to mitigate against and respond to impacts of climate change, disasters to safeguard MDG achievements and reduce vulnerabilities.

Discussions are underway for the restructuring of the existing DRM arrangements, including the establishment of a national DRM unit, under the leadership of the Prime Minister and funded by WB. This unit would be responsible for the coordination of all disaster prevention, mitigation, preparedness and response activities.

## Priority for action 1

*Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*

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### Core indicator 1

*National policy and legal framework for disaster risk reduction exists with decentralised responsibilities and capacities at all levels.*

#### Level of Progress achieved:

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### Is DRR included in development plans and strategies?

Yes

#### Means of verification:

\* Yes: National development plan

\* Yes: Sector strategies and plans

\* No: Climate change policy and strategy

\* Yes: Poverty reduction strategy papers

\* Yes: Common Country Assessments (CCA)/ UN Development Assistance Framework (UNDAF)

#### Description:

Yemen had established during the period (2007-2010) joined team works from all the concerned sectors to conduct prior plans. Government was in a great need to insert disaster confrontation in the development plans.

In 2004, the MWE presented concepts of disaster mitigation to the local partners and this was the first step in the activities of DRR. There are sectorial plans like the plans of: MWE, MAA, MOM, CDA, and the EPA, which is concerned by climate change, has started recently with funded by WB it aims to control disasters though, there is deflection in its strategy, it bases for national master development plan.

SVOC said the work of geological monitoring networks has improved, the number of monitoring station has increased in the volcanic fields and legislations for institution- building related to monitoring and studying of earthquakes and volcanoes have been issued.

YRCS said weaknesses places have been determined in 37 residential places in 10 governorates. These weaknesses include water scarcity, geographical factors that lead to risks, citizens' ignorance for the importance of environment and risks of its disasters, Tropical diseases like Malaria and Dengue( Rif Valley Fever).

MAA said, a number of systems and plans have been improved for example: The National Plan for Disasters Management and The National Plan for Confrontation Oil Pollution in the maritime Environment.

UNDP project- Disaster Preparedness, Management and Recovery- 2003 – 2010 this project aims to provide support to the Government in its exerted efforts to successfully respond to the scale of

vulnerability and recurrent localized disasters.

Although Yemen is taking proactive steps toward the integration of risk reduction in development, resource allocation and capacities are very limited.

**Context & Constraints:**

The scarcity of financial resources to collect data and publish them scientifically, conduct periodical assessment for the plans to be studied, analyzed and then modified.

- Absence of awareness.

There is no complete and vital system to manage environmental emergencies which cause economical losses and destroy the ecological systems and spread epidemics. Such emergencies are :oil and industry projects because they are linked in their works to risky substances, random construction works, random road paving. The Authority suggests inserting the following in the development plans :

- 1- The environmental considerations.
- 2- The national laws like of Customs and Investment.
- 3- Oil, Gas and Minerals extraction agreements.

It also suggests developing an environmental monitoring in the sensitive zones determined by division plan in order to achieve the balance between development requirements and the environment and its resources maintenance requirements.

It is difficult to convince the rural communities by the seismic and volcanic risk indicators and also to convince most of the society segments to accept the scientific approach and the engineering conditions when building and also in planning for prevention from seismic and volcanic risks.

The main Constraints are ;coordination and co-operation among different security agencies . The NDMU “which was finalized in 2006”, has not yet been approved by the Government. Since 2006 there has been no significant strengthening of the NDMU or of the coordination between ministries.

Yemen is still facing major national security, water and food security challenges, which is resulting in slower action on its risk reduction program. Yemen does neither integrate DRR in sectoral policies, nor has systematically integrated risk reduction in national development planning and strategies

**Core indicator 2**

*Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels*

**Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

**Is there a specific allocation of budget for DRR in the national budget?**

No

**Means of verification:**

\* 0 % allocated from national budget

\* 0 USD allocated from overseas development assistance fund

\* 0 USD allocated to hazard proofing sectoral development investments (e.g transport, agriculture,

infrastructure)

\* 0 USD allocated to stand alone DRR investments (e.g. DRR institutions, risk assessments, early warning systems)

\* 0 USD allocated to disaster proofing post disaster reconstruction

**Description:**

In the context of the Millennium Development Goals, third Five Year Plan and the economic reform program, financial and administrative (EPA) works to develop a national and regional policy in cooperation with the MPIC and other stakeholders to prepare a list of legal evaluation of programs then presenting all of these plans to the Council of Ministers for approval.

SVOC suggests the need to facilitate adequate financial resources be able to explore scientific information for monitoring seismic and volcanic activity and the production of maps.

YRCS adopts activities that mitigate disaster risks within its humble capacities, such as draft guide to volunteering in first aid, health and environmental education, , and training for disaster preparedness, response and adaptation, and to stimulate local authorities to manage disasters, etc.

UNDP provide support to the Government n in its exerted efforts to successfully respond to the scale of vulnerability and recurrent localized disasters, which include earthquakes, floods, droughts and various epidemics through disaster mitigation, disaster response and recovery. This will be achieved through the following outputs:

- Establishing the necessary institutions (DMU / National Emergency Operations Center)
- Formulating and implementing a Disaster Management national contingency plan
- Establishing a Disaster Management Information System (DMIS) Database and Communication System
- Building the national staff capacity at the central and governorate levels in DRR

DRR (in multi sectoral sense) is not receiving adequate policy attention, and as a consequence funds allocation is not systematic.

**Context & Constraints:**

- There are no prior financial terms with the government as allocations for natural disasters.

This is a new experience in the current policy. It needs long time, great efforts and huge implementing capacities to be taken into account especially in the light of the current economic situations.

Regarding the industrial disasters, some of the related governmental sectors have initiated to allocate partial budgets from their own general budgets in early 2001 to conduct the measures of the National Plan for Emergency Oil Pollution of the Marine Environment as an example.

Should support the GDEED to do its job and strengthen coordination with the representatives of local communities and associations and also to develop a legal framework to manage disasters according to the capabilities available.

The government's ignorance to the recommendations accompanied to the reports and technical studies or specialized workshops and budget projects carried out by the center. To succeed in its work, SVOC is a must to be supportive locally and internationally to vitalize series of implementing and application procedures for the operations of land use and building permits according to scientific standards and in acceptable limits.

YRCS determines challenges as the following:-

- 1- Change the pattern of disaster.
- 2- Climate Change.
- 3- Geographical nature of Yemen delays to reach populations quickly.
- 4- Growing internal migration, and from the African Horn to Yemen.
- 5-Drought, desertification and lack of rain.
- 6- Population explosion compared with the limited resources.
- 7- Scarcity of disaster confrontation resources and reliance on donors support.
- 8- the solutions for these problems lie in the proper modern planning and establishing projects of nature sources protection.
- 9- Raising public awareness.
- 10- Integrating platform of DRR in educational curricula and official media programs.

### **Core indicator 3**

*Community Participation and decentralisation is ensured through the delegation of authority and resources to local levels*

#### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

#### **Do local governments have legal responsibility and budget allocations for DRR?**

No

#### **Means of verification:**

\* No: Legislation

\* No: Budget allocations for DRR to local government

#### **Description:**

There is no special legislation that authorizes local government absolute financial authority to reduce disaster, but Governors supervise the public life , and draw some of the budget to face province's emergency response and recovery when necessary, and this is contrary to the laws of the State in the eyes of control and inspection authority, but it excludes expenditure on emergency situations, and is mainly attributable to the novelty of the experience of local governance and lack of experience; therefore need to achieve this goal and time of the accumulation of experiences qualify the local government, since government is seeking to vitalize the activities of local authorities, but their plans are going slowly.

It is necessary to vitalize coordination between central and branch activities, and local response to contain the risks, and allocate the local capacities for the proposal effective contingency plans, and these requirements are still inactive and ineffective.

That efforts are formally determined to move to the decentralized planning and implementation, starting with the election of members of local government and sees the need to expand its powers; to be able to confront disasters at the local level with the local possibilities according to the NDMP.

That there is a mandate for local authorities in resource use and allocation of financial resources within their budgets to cope with DRR.

There is already progress towards decentralization in Yemen, and Yemen's decentralization policy has mandated local governments with disaster risk management and reduction. The legal foundation for

developing and implementing disaster risk management programs at the local level already exists.

### **Context & Constraints:**

One of the most difficult challenges is activating the role of the local authorities, and rehabilitating it by expertise, technical competencies and financial resources needed to collect data in all governorates of the republic and be analyzed and creating independent maps for the hotbeds of the risks in each province, and the issuance of legal laws and amending the laws of the local authority present to legally carries out its tasks in this context.

The current situation left the door open for interpretations. One more challenge is the lack of qualified human elements to manage crises and disasters. Strengthening the capacity of the local authority and the local community for the management of disasters and crises, giving them more powers, and the forming national / local volunteer teams for disaster response. The need for engage organizations and international experience to activate the area of disaster management at all national and local levels by devising and implementing plans, including planning of training and awareness programs and their implementation, and activating artificial scenarios simulate the potentials occurring disasters for the sake of training to contain the difficulties encountered.

The EPA stresses the danger of the lack of an early warning unified national Advanced system coordinated by the MWE and based on the assessment of existing capacity for early warning to face disasters as diverse as the tsunami and flash floods. Thus, Yemen should join to the regional early warning systems to develop its own. In order to be a partner in the proceedings of the regional coordination, as part of this, it should create a network of monitoring environmental indicators of interest and map the potential environmental hazards based on studies of established statistical information base in the event of environmental emergencies and disasters.

### **Core indicator 4**

*A national multi sectoral platform for disaster risk reduction is functioning.*

#### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

#### **Are civil society organisations , national planning institutions, key economic and development sector organisations represented in the national platform?**

Yes

#### **Means of verification:**

\* 0 civil society members (specify absolute number)

\* 0 sectoral organisations (specify absolute number)

\* 0 women's organisations participating in national platform (specify absolute number)

#### **Description:**

There are two frames of the national program, deal with aspects of the disaster and are as follows:

1. In 1998, the SCCD, announced a presidential decree, the Commission cross-section of stakeholders to address the commitments and coordinate the responses of the disaster. Despite of its weakness, but it could be improved in terms of institutional arrangements and capacity building.

2. In 2005, The national team was founded to reduce emergency and environmental disasters under the auspices of the MWE with guidance of the UN-ISDR and in cooperation with, where Yemen owns national system of effective multi-sectorial DRR. The MWE and the national team ,made up of sectors and relevant agencies of all, represent a national point of contact .This may regulate an independent body includes all concerned authorities, and achieving great achievements will reflect its observed progress in this aspect. But it lacks resources , and efficient expertise.

The EPA plans to design the program of preventive and corrective acts, to develop disaster management mechanisms and methods of control and their implementation in different regions. The program includes activities proposed for implementation at the national level, such as the status management program to reduce exposure to risk and its application, and another for the rehabilitation of affected areas, and set a series of disaster control.

In the context of the national system YRCSt is considered a working platform to reduce the risk of disasters.

The Council is responsible for providing policy direction, approving plans for disaster preparedness and response, and defining the tasks and responsibilities of each ministry/agency, actors and before and during any emergency with International Cooperation, and the local administration,

### **Context & Constraints:**

- The absence of a unified network for the exchange of information used in reasonable ways.
- The limited support and rehabilitation.
- The poor coordination and communication since the procedures are related to ministers and officials of government departments which make procedures delayed.
- The lack of a comprehensive information prior to the past situations and dispersion.
- The carelessness of senior leaders that try to acquire the management committees of disaster reduction for the exploitation of foreign support.

The EPA shows its willingness to support the government's actions on the local and central levels, in collaboration with local NGOs in the field of rehabilitation and control techniques and methods of implementation. It also proclaims its support for community efforts in the use of vital means to control over some disaster risks.

Whereas the YRCS sees that the most important challenge facing active partners in disaster management, is the lack of clear and specific powers or roles in disaster management for the key partners. When a disaster takes place a committees formed without advance planning, without specifying clear and specific responsibilities, and without allocating financial resources or budgets to meet the costs and consequences of disasters. Also, the diversity of those who make reports or calls for help. Determining a single authority to administrate emergency operations in the field and coordinate efforts either during the disasters or after they occur is something needed.

## **Priority for action 2**

*Identify, assess and monitor disaster risks and enhance early warning*

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### **Core indicator 1**

*National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.*

### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

**Is there a national multi-hazard risk assessment available to inform planning and development decisions?**

Yes

**Means of verification:**

- \* Yes: Multi-hazard risk assessment
- \* 0 % of schools and hospitals assessed
- \* 0 schools not safe from disasters (specify absolute number)
- \* No: Gender disaggregated vulnerability and capacity assessments
- \* No: Agreed national standards for multi hazard risk assessments

**Description:**

Yemen during this period with the efforts of other agencies concerned conducted a partial assessment for some of the risks. This assessment did not circulate to all sectors and all potential risks in the State. The distribution of vulnerability and capacities depending on the type of sex in this part of the evaluation. However, analytical data were available through 2007 – 2009 in particular and were provided with budgets and proposals to help the decision-makers to include them within the development plans to take the necessary decisions.

The EPA carried out appropriate steps with the MPIC for the integration of environmental dimension in the budget of five-year plan for each sector, and identified three areas for action in 15 years to come, including plans to adapt with negotiation in the various national, regional and international levels, and how to achieve the role of the EPA in planning activities, projects and programs implemented legally by the authority. It also prepared plans for the development of human resources commensurate with the needs of the strategic action plan included a unified system .

MAA said that there is a tangible progress in the part of the developing and updating data, information and maps of the areas at risk (e.g. areas prone to earthquakes and volcanoes, areas at risk of sea-level rise).

DMU is being supported by the UNDP said an initial assessment report from this project highlights a list of priority actions and priority intervention locations which are Al-Mahra, Hadramout, Aden, Shabwa, Abyan, Lahj, Taiz, Hodeidah, and Hajja. It also lists the key players that need to be involved in these areas. The project has supported community awareness programs in two pilot areas – Al-Mahra and Socotra Island. To add, and a tsunami risk consultancy for potential tsunami threat, the location of the most vulnerable areas and people exposed.

**Context & Constraints:**

financial and coordinating constraints, the absence of evaluative standards that determine risks and develop procedures, lack of skills and training, scarcity of supplies and equipment

The EPA sees that the most important challenges the government or the national authorities faced were to develop the strategic plan which needs specific environmental policy ,urgent thinking, authorization and publishing. They include:-

- 1 - completing the policy statements regarding:

- The polluter pays principle.
- The data and information of the EPA systems and legislation.
- Incentives for small investors.
- The license for inspection entities.

2 - Searching for serious cooperation among the different sectors to work with the General Authority for the protection of the environment according to a more smoothly mechanism, so as to make its data and results available to the EPA.

3 - Preparing a program for the pricing of environmental resources to reflect the real value to society and estimate the cost of environmental degradation.

4 - The EPA depends on its role by small projects across the international environmental programs and conventions and they are not a sustainable source of funding; so there should be bigger financial obligation than of the government to allow the EPA to implement its role perfectly through the provision of the necessary financial and funding resources to sustain its activities and cover all the local environmental aspects.

In the view of SVOC that the most important constraints is the absence of clear criteria for the organization of earthquake-resistant building since Dhamar earthquake in 1982 .To be informed the seismic information indicate that the province would be exposed to earthquakes in the future

## **Core indicator 2**

*Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities*

### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

### **Are disaster losses systematically reported, monitored and analysed?**

No

### **Means of verification:**

\* No: Disaster loss database

\* No: Reports generated and used in planning

### **Description:**

Losses are announced after the occurrence the disaster. Reports and follow-up analysis are implemented by most of the governmental directions in an ad hoc independent way on the level of each sector, based on the efficiency and responsibility of this direction. Decision-makers show their concern by the subject and analysis of those reports ends by mandating and compensating residents for their property to recover after the disaster. The concerned direction gives requirements, and it could be a personal initiative by traders, while the rest of the related directions, the importance of such information depend on the responsibility of that direction and its duties towards the disaster. Within the two past years such reports began to develop into plans gathered in the MPIC, especially after the disaster of Hadramout, but it lacks the database on disasters.

And there is a little advantage from the seismic risks information and mechanisms of its updating. The availability of methods of controlling or monitoring requires achieving the objective of availability. Information is monopolized sometimes.

By UNDP:

- Establishing a (DMIS) Database in NDMU
- Yemen Base map for GIS system complete.

As a regional initiative from UN-ISDR and UNDP Disaster data collection established launched recently .IT department started to collect disaster data in Yemen which happen in the last 30 years, those information will be integrated with the available GIS system base map during project's DesInventar, use project server in IT department as the main disaster database server in Yemen.

National authorities and particularly the Prime Minister's Office are taking the lead to ensure that DRM is mainstreamed into national development planning. As a result of a shift from a reactive to a proactive approach to risk management, DRR measures are leading to more systematic risk identification and assessment.

#### **Context & Constraints:**

- Dispersion of data and information, and the weakness of investigation and scrutiny.
- Inefficiency of collection, analysis and dissemination of data methods.
- The absence of historical information.
- Overlapping of responsibilities and lack of coordination.
- Indifference and negligence about the importance of information as soon as the disaster disappears.
- Delaying of the implementation procedures.
- Lack of experience or lack of efficiency as well as lack of systems and equipment needed to accomplish the task.
- Scarcity or the lack of adequate financial allocations of funding and in a timely manner.

Specific environmental problems are usually dealt with using a mix of policies consists of a variety of tools, monitoring, control, economic instruments and tools for persuasion. The effectiveness and efficiency of economic instruments depend always on the macroeconomic policy mix. The perfect tool should achieve its purpose with the lowest possible cost and at the same time helps to improve the efficiency of resource use, increases productivity and economizes in scarce resources (such as capital, skills and management). It is also desirable that the tool should encourage change towards development and builds technologies that are more efficient and less wasteful for production. In this regard, transitional priorities of the country clearly prefer cost efficiency and flexibility of economic instruments on the harshness of unit-cost tools for command and control, and regular meetings can operate to update the data and exchange of experiences.

Data sharing is not a common practice, hindering the development of national risk reduction and resilience.

### **Core indicator 3**

*Early warning systems are in place for all major hazards, with outreach to communities.*

#### **Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

#### **Do risk prone communities receive timely and understandable warnings of impending hazard events?**

No

#### **Means of verification:**

\* Yes: Early warnings acted on effectively

\* No: Local level preparedness

\* No: Communication systems and protocols

\* Yes: Active involvement of media in early warning dissemination

**Description:**

EWS did not include the legal framework so far in the majority of disaster management systems, but several points are engaged in some early-warning functions of these national bodies if appropriate resources were ensured within an appropriate coordinating mechanism. Such authorities and their tasks are as follows:

1. For geological hazards; the SVOC.
2. For desert locust attacks, the National Desert locust Combating Center
3. RSC, under the supervision of the Ministry of Communications and Information Technology.
4. Climate and meteorological hazards, the EPA.
5. MC under the supervision of the Ministry of Transport.
6. Authority of Water Resources, under the supervision of the MWE
- 7-CDA, under the supervision of the Ministry of Interior.

And most of these centers has a branches in a number of governorates.

There are no effective early warning systems, or a local readiness. Media instruments and Meteorology and weather devices imported two years ago participate to warn citizens of the dangers weather, but had not been completed yet. The sirens which have been developed recently are used within the some cities.

By the succession of disasters in Yemen, authorities initiated to find an EWS and were established in the following main cities: Sana'a - Aden - Taiz - Hodeidah and Mukalla, along with providing some equipment for visual surveillance and sirens.

Formal national EWS have yet to be developed, and efforts to update it with support from the UNDP for DMU are underway

**Context & Constraints:**

- The lack of early warning systems with the absence of financial allocations.
- Lack of awareness at the levels of authority and communities.
- The lack of a unified information network.
- Non-availability of means to deliver warnings to all areas of the country 24 hours a day like the media instruments and this is due to the lack of electricity in rural areas and power outages in cities that may paralyze the country.
- Poor coordination between the relevant agencies and local authorities.
- The absence of rehabilitation and training.

It is proposed to: provide financial resources and launching validities for the concerned authorities in matters relating to disasters; to do what needs to be done, especially in the critical situations, raise public awareness and cooperation with the telecom companies and to build the national capacities at the level of the relevant government agencies and local communities. As well as the need to overcome all the challenges mentioned above to achieve the desired goal of disaster reduction and mitigation in order to preserve life and property.

There is a need to perform a search on this topic Information and data will help better to verify the causes of hazards and the best ways to deal with their environmental and healthy results.

Improving the functionality of any early warning system, including in Yemen, is critically dependant on improved coordination and information sharing among DRM agencies.

#### **Core indicator 4**

*National and local risk assessments take account of regional / trans boundary risks, with a view to regional cooperation on risk reduction.*

#### **Level of Progress achieved:**

1: Minor progress with few signs of forward action in plans or policy

#### **Does your country participate in regional or sub-regional DRR programmes or projects?**

Yes

#### **Means of verification:**

- \* No: Programmes and projects addressing trans-boundary issues
- \* Yes: Regional and sub-regional strategies and frameworks
- \* Yes: Regional or sub-regional monitoring and reporting mechanisms
- \* No: Action plans addressing trans-boundary issues

#### **Description:**

Yemen participated in a number of regional and international activities dealing with issues of cross-border , regional strategies , reporting and so on. The fact that participation in all of these events is a part of cooperation with the international organizations that provide support and assistance to Yemen. For sharing information, both at the level of countries in the region or at the global level, Yemen receives information pertaining to the cause of disasters, such as meteorological information and marine forecasts because the cooperation in this field is necessary at all levels. But Yemen is not able to provide the countries of the region and the sub-region information adequately about such disaster, due to deficiencies and as we stated in the terms of this template.

Yemen has signed the Kyoto agreement on climate change, and there are efforts to monitor and control the Red Sea and Gulf of Aden and the Arabian Sea - PERSGA - that Yemen is one of six members and play an important role ,as well as ,interventions to limit the intercontinental epidemic diseases such as Swine Flu and fatal childhood diseases through continuing the immunization campaigns, and efforts to eliminate the epidemiology of livestock through monitoring and evaluation, surveillance and routine immunization campaigns.

There is a regional cooperation, especially with the neighboring countries of Yemen, in which a number of quarantine and veterinarian places were established at the entrance to the border and airports, and the local cadres are keeping working side by side with the relevant authorities.

The DMU supported by the UNDP may partner with Oman to share early warnings about tsunamis with coastal communities and is seeking to collaborate actively with Gulf Cooperation Countries in developing a regional mechanism in areas related to DRR.

#### **Context & Constraints:**

There are a number of obstacles facing the decision-making and planning management; the first is the lack of reliable and new information about indicators of human activities on the environment and natural

resources, at the same time, the results of environmental degradation and non-rational use of natural resources in the sustainable development processes. The second obstacle is the inadequate management of data and information as a result of a combination of factors, including lack of financial resources and trained manpower and lack of awareness and availability of information and institution building. There are challenges related to environmental information collection, and publication. In addition to that, the monitoring organizations do not feed their results in a general information system. There is a lack of the comprehensive approach, too.

These obstacles can be overcome by the dedication, first to adopt scientific methods in solving problems, and establishing local and national units of disaster management in all countries of the Region to work hardily in cooperation and coordination in one window. And also to look for multiple national and international sources of funding and allocating a fixed budget from the state budget of each country; to be able to train personnel and conduct extensive studies to build a broad base of information from which decisions of environmental reform in accordance with long-term strategic plans. Instead of creating a disaster management, it could be establishing a Ministry of disaster management in each country to take up this matter.

### **Priority for action 3**

*Use knowledge, innovation and education to build a culture of safety and resilience at all levels*

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#### **Core indicator 1**

*Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc)*

#### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

#### **Is there a national disaster information system publicly available?**

No

#### **Means of verification:**

\* No: Web page of national disaster information system

\* No: Established mechanisms for accessing DRR information

#### **Description:**

There is no website for national information system on disaster to accommodate all issues related to disasters except some of the information and figures deposited in some internet sites in forms of general information. Some disasters statistics in the country can be got as general and epitomized information in the formal and informal sites which are scattered information that can not be got benefited from directly. There is such information in some sectorial plans and national policies and public reports, but the mechanism of accessing to them is non-specific or not systematic.

Yemen has received a library in the field of DRR presented by the UN-ISDR for DRR in 2008. There is a plan to distribute a copy among universities and research institutes to provide sources for information.

Seismic information is distributed in bulletins as they occur daily, quarterly or annually (regularly) among the related sectors. But there are no mechanisms for their deployment. Most of information comes from

national reports, and reports of the UN system and also from the periodic reports of the IFRC about disasters in Yemen.

The establishment of the GDEED by the MWE forms a core of coordination and work with various government agencies to their respective jurisdiction, to create previous, appropriate plans and strategies to the reduction of environmental emergencies and mobilizing resources to confront them and integrating the concepts of risk reduction within the general policy framework of state and to consider various risks reduction as the national priority through creating of appropriate mechanisms and working together .

As a regional initiative by UNDP and UN-ISDR to build a database to collect data disasters for last 30 years in Yemen in DesInventar program .

UNDP DMU website [www.dmu-yemen.org](http://www.dmu-yemen.org) is used to provide information about disasters for publicly.

### **Context & Constraints:**

- Lack of financial means to implement the collection, analysis and archiving of data and information, as well as an assessment of risk and vulnerability ...etc.
- Archiving systems are weak in all state agencies.
- The lack of information network specialized in this aspect.
- Absence of a unified program to serve all the relevant authorities.
- Deficiencies in the installations and equipment required for the implementation of what mentioned above.
- The absence of skills and experience.
- The absence of historical data

It is recommended to qualify national cadres, provide financial support, and the urgent need for international consultancy and technical assistance by friendly organizations ,countries and interested parties. As Yemen is still new in the experience of natural disasters, illiteracy rates in the community should be reduced .Solutions for lack of financial capabilities, technical equipment, skills and human resources represent priority because of the scarcity of providing the main needs. The continuing awareness strategy should be activated. A local training and awareness program has been implemented after the earthquake in Dhamar in 1982. But after the expiration of a period of 28 years these experiences or trained people are no longer present in the local communities .In addition to that, changing the ways of thinking and behavior in these communities about the seismic risks.

### **Core indicator 2**

*School curricula , education material and relevant trainings include disaster risk reduction and recovery concepts and practices.*

### **Level of Progress achieved:**

3: Institutional commitment attained, but achievements are neither comprehensive nor substantial

### **Is DRR included in the national educational curriculum?**

No

### **Means of verification:**

\* No: Primary school curriculum

\* No: Secondary school curriculum

\* No: University curriculum

\* No: Professional DRR education programmes

### **Description:**

Disaster reduction issues were included into the modified curriculum (2001), at both primary and secondary levels. In the framework of a strategy to develop education in general, and in the framework of (the National Strategy for Basic Education 20,012,015), the focus was on many of the concepts of natural, environmental, humanitarian disasters locally and internationally in all areas, such as health, hygiene and environmental pollution, earthquakes and volcanoes, traffic accidents, wars, and phenomena of revenge and chewing Qat, illiteracy and lack of water resources, food..etc. The focus on these concepts from a school subject to another is varied depending on the nature of the subject and its objectives. This came as a reflection of the development of the objectives of the educational system in Yemen and the objectives of the subjects starting from the cope with the contemporary global problems and trends. They are appropriate doses of awareness. The Ministry of Education of Yemen plans to develop a new educational platform after the current one had been for ten years (2001- 2010) taking into account the outcomes of the present and future variables in a world fraught with new developments.

UNDP says a national strategy for awareness, targeting school children specifically and the public more generally, is being developed by the National Disaster Management Unit. The literature that is being developed for the awareness campaign includes advice on 'what to do during emergency'. Also included are interactive games for children.

The University of Sana'a is leading the development of a curriculum for a disaster risk management and climate change adaptation academic program, for schools as well as for institutions of higher learning.

### **Context & Constraints:**

Integrating such concepts faces difficulty even in coordination and implementation by the authorities concerned with the curriculum of national education. The Yemeni government had early directed integrating awareness curricula that are specific to each sector into the educational curriculum, especially of primary and secondary schools. Curricula have become political, environmental and healthy concepts which made integrating of new concepts to be unacceptable by the Ministry of Education. School textbook designing is put into specific criteria that can not be overcome. One of the most important criteria is to achieve balance in all aspects of the variables so as not to overshadow the other side. This challenge can be overcome by correspondence and holding consultative meetings between the concerned sectors. In addition to that, spreading detailed awareness in this aspect and then considering the inclusion of brief concepts within curricula that are based primarily on earlier information in the minds of the community. The issue of disasters at the state level is a new topic needs to details that may not be absorbed by the educational curriculum.

To overcome these challenges requires strengthening of awareness at all levels in order to make the concept of disaster reduction be supported and applauded from all levels

UNDP confirms that lack of awareness at all school curriculum levels is consider the main constraint.

The institution's perception and understanding of risk is still very limited in the country, thus making provision of forma DRR education and the dissemination of risk reduction information not a priority.

### **Core indicator 3**

*Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.*

### **Level of Progress achieved:**

1: Minor progress with few signs of forward action in plans or policy

### **Is DRR included in the national scientific applied-research agenda/budget?**

No

\* No: Research outputs, products or studies

\* No: Research programmes and projects

\* Yes: Studies on the economic costs and benefits of DRR

#### **Description:**

The initiative between the MWE and Research Organization (Disaster Vulnerability and Emergency Management, Asia) UK, University of Northympreia that states to establish a master's degree program in Yemen in cooperation with the Center of Water and Environment, Sana'a University in the field of disaster management and reduction, but has not yet seen light.

Due to the absence of a national budget for the applied national researches concerning disaster, the National Policy for the budgets allocated for the process of research in all fields are weak and may not exceed 5% of the overall budget as the general statistics provide indicators of a lack of support for scientific research.

There are a number of centers and institutions related to the production and dissemination of technologies, technical information and scientific knowledge as ISAs research, studies centers, universities and a number of other similar institutions. These sectors have plans, programs and activities to discuss and study aspects related to the environment, but they are done without a link or a unified vision or in accordance with unified national policies and platforms. But it differs from one side to another on this matter. Many of these entities have results of research, studies and surveys that include a lot of information about the different aspects of environment, but there is no clear mechanism for information exchange and dissemination. Efforts flowing in the direction of scientific research are great, but without clear policies. There is inertia in the process of dissemination of data and in making it available.

Multi-risk assessments and cost benefit analysis are being completed and strengthened through the three risk assessment studies financed by the World Bank.

#### **Context & Constraints:**

- Lack of awareness at the level of decision-makers.
- Scarcity of the governmental financial resources.
- Lack of confidence to support research, especially in this aspect as if it is considered pointless and redundant.
- The absence or lack of presence of staff that is interested and active in the disaster field.
- The absence of binding legislations and laws.
- The lack of appropriate, effective and coordinated information systems based on united standards.
- Most of the outputs of research institutions' information are directed for different purposes, too. And often they are not regularly available, appropriate and sufficient.
- Acquisition of agricultural research on the outcomes of scientific research and scientific disciplines are available up to (85%) in different regions.
- Inadequate or in some cases the absence of institutional forms of the organized and active communication among the stakeholders to promote cooperation and integration of resources and capabilities.

Lack of cooperation between national partners is limiting the performance of cost benefit analysis and of

the systematic assessment, evaluation and communication of risks.

Recommendations needed here are focused on raising awareness and availability of financial resources and technical training and rehabilitation of existing capacities to reach their demands to decision makers in reasonable and logic ways.

#### **Core indicator 4**

*Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.*

#### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

#### **Do public education campaigns on DRR reach risk-prone communities?**

No

#### **Means of verification:**

\* No: Public education campaigns.

\* Yes: Training of local government

\* No: Availability of information on DRR practices at the community level

#### **Description:**

In early 2009 the GDEED inaugurated the National Campaign for The Safe Transport, Storage and Use of Chlorine substance which targeted all the local foundations of Water and Sanitation in Yemen. It aimed to raise the social awareness and contribute in enhancing the safety systems in facilities and local communities and how to use the Chlorine substance in drinking and sanitation water. The outcomes of this campaign were a bundle of decisions, recommendations about the standards of Chlorine and its rate in drinking water or sanitation water and the safety conditions for transporting this substance .The Ministry directed these foundations to commit by the required standards.

Despite the national efforts to create ecosystem media to the public but still the outputs of these efforts are below the level required for many overlapping factors: The expertise and technology play a big role and prevent to reach into achieving the active results, lack of specialized staff in environmental media. It should reach to specialized and qualitative media as it is commonly recognized by (developmental Specialized media) like (Environmental / healthy / agricultural / tourism media ... etc .As it is followed in many of the developing countries.

Public awareness should be promoted through media policy and a long-term strategy to integrate the process of awareness in the daily programs of official media, in the light of adequate financial resources and political commitment.

According to UNDP, a national strategy for conducting awareness raising events and campaigns and Disseminate awareness raising materials to targeted groups and governments exposed to disasters , is being developed by the NDMU.

#### **Context & Constraints:**

- Non-availability of financial allocations to the authority concerned with issues of disasters represented by the National Focal Point and the national team for implementing the tasks of publishing and

awareness.

- The lack of an independent Institution on this matter as the national focal point and the formed National Team did not reach to all of their powers. All governmental apparatuses see that they are not all concerned by this role except for the performance of its obligations regarding the disaster during its occurrence and to tackle situations at that time.
- Not determining roles (up to now), which is supposed to be developed within the framework of a unified national plan, which will be conducted by the National Focal Point and the relevant authorities.
- High rates of illiteracy in the community.
- The presence of the media and environmental awareness could be focused primarily on print media such as newspapers, periodicals and magazines. These publishes are attributed that they are occasion-present and periodic. They are non-attendant, as well as changing of their names and limited distribution, and in some cases the total disappearance for these publications after a few number of issues.
- Lack of financial means and technical equipment, skills and human resources.

Therefore, it is a must to find an international expert to assist those involved in Yemen to determine the roles and complete the national plan, as well as providing financial and technical capabilities that enhance this role.

## Priority for action 4

*Reduce the underlying risk factors*

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### Core indicator 1

*Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management and adaptation to climate change.*

#### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

#### **Is there a mechanism in place to protect and restore regulatory ecosystem services? (associated with wet lands, mangroves, forests etc)**

Yes

#### **Means of verification:**

- \* Yes: Protected areas legislation
- \* No: Payment for ecosystem services (PES)
- \* Yes: Integrated planning (for example coastal zone management)
- \* Yes: Environmental impacts assessments (EIAs)
- \* Yes: Climate change adaptation projects and programmes

#### **Description:**

In 2007, MWE completed some of the paragraphs and items related to the risks of drought and floods in the Bulletin of the National Strategy, and there are also more than 10 items related to disasters and DRR that have been added to the environmental law draft No. 96 of 1995 .

There is a mechanism to protect and restore the organizing ecosystem services, but it is not comprehensive as required in terms of implementation of laws and projects targeted. There are protected areas and legislations to protect them but the implementation mechanisms are missing. There are no payments for ecosystem services, accompanied by the existence of shortcomings in the management of coastal areas included in the plans of the MWE, because of the inadequacy of monitoring and evaluation. The legislations of the environmental impact assessment is included in the national plans of the state .They were partially implemented in some projects, accompanied by apathy and manipulation in its implementation, and WB cooperation with EPA launched a project is climate change and adaptation.

After the rock fall in the village of Althafeer (December 2005) the project of producing risks map of cap rock was established in the Geological Survey Authority with government funding.

After the flood of Hadramout and Al-Mahra (October 2008) the WB financed through the program GFDRR a study of mapping the disaster, and making Atlas of the national disaster.

Yemeni Environment Protection Society, the Friends of Environment, the Beekeeping Association, Agricultural Unions, Women Associations have set their respective objectives on the promotion of public awareness of environmental protection issues and responses as well as on initiating some field-work relating to environment and desertification control activities.

#### **Context & Constraints:**

- Non-implementing the binding laws and legislations.
- Scarcity of financial and technical capabilities.
- Lack of the encouraging alternatives.
- Lack of awareness and knowledge in aspects of disaster risks.
- Lack of participation the women and youth in the environment protection.

The EPA sees that there are other challenges:

1. Intensity of pressure and threats on natural resources and ecological balance.
2. Weakness of the strategic planning for developmental sectors and to identify priorities, policies and options for sustainable environmental development and updating indicators regularly.
3. Lack of the economic mechanism for the real pricing of resources such as energy and water that lead to environmental damages ,waste of natural resources , increase of pollution and not calculating the cost of environmental degradation within the national economy.
4. Lack of community awareness about the environmental issues which weakened the motives and stimulation to conserve and properly manage the environmental resources.

The absence of issuing the legislations circulars relating to land use linked to seismic hazards.

The Geological Survey Authority states that it was planned to produce a risks map of cap rock of Yemen in three years; however, there is a lack of resources due to the economic conditions of the country which prevented the commitment to the proposed period of time.

To overcome such obstacles requires providing an adequate support of technical requirements, qualitative training and rehabilitation, institutional capacity-building and creating binding legislations

#### **Core indicator 2**

*Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.*

**Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

**Do social safety nets exist to increase the resilience of risk prone households and communities?**

No

**Means of verification:**

\* No: Crop and property insurance

\* Yes: Employment guarantee schemes

\* No: Conditional cash transfers

\* No: DRR aligned poverty reduction, welfare policy and programmes

\* No: Microfinance

\* No: Micro insurance

**Description:**

The regional initiative by the UNDP and the UN-ISDR Disasters-Risk and Poverty Analysis to build a database to account for disaster in Yemen for last 30 years and to identify trends in disasters, DesInventar is considered an important step which has a significant impact to reduce the vulnerability of affected communities that are most vulnerable to disasters and risks.

The national plan for disaster risk assessment and climate change was done between the MWE and the WB Project to reduce disaster risk, which will cover the vulnerable communities to disasters in local administrations, which will have a significant impact on the ease of assessing the places exposed to the disaster.

In 2007, the YRCS conducted an assessment for the viable populations to be exposed to disasters in five local administrations in Yemen. This evaluation focused on the adaptability of community recovery during and after the disaster.

Because of the presence of social security for poor families that currently does not meet the normal living purposes, and originally there are no guarantees for communities at risk. No study has been carried out for the risk-prone areas.

The guarantees and other social security types are non-existent except for a small percentage of insurance on the property of foreign companies, authorities and employment salary guarantees.

It is hoped the following : the decline birth rate per thousand population, the decline of infant mortality rate and children under five. It is expected that life average will improve by 2025-2030. Consequently, it is hoped to decrease the rate of population growth (annual average percentage). Population momentum is short, and the rates of population in the younger groups indicate that the high population growth rates are not expected to be dampened in the near-term, which require appropriate remedies.

**Context & Constraints:**

One of the most important challenges is the existence of social security nets that are weak and not sufficient to support the issue. Therefore, it is recommended to develop it to be more understandable to the necessary needs for associations according to the existing economic situation. The existing social

security is granted sometimes in unfair ways because of the impartiality of the commissions that determine who deserves it. It may be taken by the unworthy and denied to those who deserve it. This requires entrusting the matter to committees of fair piety and justice.

The concerns of the population are part of the national strategy for environmental sustainability. For this reason, Yemeni canters have specialized in anthropology and human resources development to improve the techniques of population planning and anticipating the possible consequences of the present and future human activities. one of the possible consequences is the emigration from the countryside to the cities as a result of climate change and the cumulative environmental transformations that have an impact on the livelihoods of local people in rural areas. And look forward for better public service .

### **Core indicator 3**

*Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities*

#### **Level of Progress achieved:**

1: Minor progress with few signs of forward action in plans or policy

#### **Are the costs and benefits of DRR incorporated into the planning of public investment?**

No

#### **Means of verification:**

\* No: National and sectoral public investment systems incorporating DRR.

\* No: Investments in retrofitting infrastructures including schools and hospitals

#### **Description:**

In October 2008, the GDEED in collaboration with the World Bank Disaster Risk Reduction organized a training course to assess the losses and damages of the disaster as a starting point to build capacities at the national level. This training has been provided a national model to assess the losses and damages on the basis of a comprehensive study conducted at the beginning of 2008, which covers all kinds of national sectors.

While Yemen has not implemented any type of economic sectorial plans to overcome the plight of unemployment, but it has recently done social marginal awareness programs to guide the youth to technical education and professional training and to coordinate with the Arab Gulf states to receive the Yemeni labor, but actually government did not encourage young people by scholarships and bonuses to attract them to these institutes. Furthermore, these institutions lack the material and hardware resources.

In early 2009 the GDEED inaugurated the National Campaign for The Safe Transport, Storage and Use of Chlorine substance which targeted all the local foundations of Water and Sanitation in Yemen. It aimed to raise the social awareness and contribute in enhancing the safety systems in facilities and local communities and how to use the Chlorine substance in drinking and sanitation water. The outcomes of this campaign were a bundle of decisions, recommendations about the standards of Chlorine and its rate in drinking water or sanitation water and the safety conditions for transporting this substance .The Ministry directed these foundations to commit by the required standards. UNDP supports some productive projects in areas exposed to disasters .

#### **Context & Constraints:**

The top of all the challenges in each axis or discussion is the financial resources that build up outlines for

the implementation of any activity in Yemen. Training and trainers in raising awareness of disaster risk should be quality-targeted. It will enable those trainers to transfer the message in an easy understandable and accepted manner for the potential trainees. The communication skills and high participation are essential to mobilize the recipients to look at environmental disasters differently. Starting this process as soon as possible is needed to meet the environmental and developmental goals of Yemen. The Government should establish with the private sector, civil society and international organizations broad centers to train the manpower in various spheres of life.

#### **Core indicator 4**

*Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.*

#### **Level of Progress achieved:**

1: Minor progress with few signs of forward action in plans or policy

#### **Is there investment to reduce the risk of vulnerable urban settlements?**

Yes

#### **Means of verification:**

- \* Yes: Investment in drainage infrastructure in flood prone areas
- \* Yes: Slope stabilisation in landslide prone areas
- \* No: Training of masons on safe construction technology
- \* No: Provision of safe land for low income households and communities

#### **Description:**

This process takes place in the form of compensations at the time and after of the incident occurrence. There is no study before the incident occurrence to prevent its taking place or to reduce it, for example, as it happened in the village of Althafeer, in Sana'a governorate.

Population growth and expanding economy create competitive uses of land and tension between the multiple interests, and the sustainable use of land means finding a balance that reaps the major benefits of the social and economic development and at the same time protects and enhances the environment. The appropriate management of the land is necessary to protect the biodiversity, sustainable land-use, property protection. Rights of local communities are essential part of the process of access to sustainable uses of the land. There is little progress in the management of seismic and volcanic risks in terms of plans or policies. It is needed to a desire and support to continue this approach. UNDP supports early recovery in Hadramout governorate after The Flash Floods of Hadramout.

Some small scale investment in to improve flood management are taking place. These efforts are being supported by the international community through the development of feasibility studies for the feasibility of alternatives to mitigate flood risk through water management in Hadramout and Al Mahra governorates

#### **Context & Constraints:**

Financial constraints.

- The absence of legislations, policies, plans and studies in this aspect.

It is recommended to provide financial allocations, issue legislations, policies, financing the work of research studies in this aspect, and coordinating the efforts of the central and local administrations on

implementing and monitoring the plans or policies in this area.

The main environmental challenges in Yemen are the high salinity levels, the increase of logging for firewood, unjust grazing, the increasing erosion of soil from wind and water, and the deterioration of traditional systems in agricultural practices.

The land-lease arrangements, which are among the causes of soil erosion, are not conducive to increase production. Other factors include; the irrational use of irrigation water in the irrigating areas, the weak agricultural guidance and the limited research returns. The result is the low productivity of land and livestock alike, which accelerates the pace of poverty and, consequently, the migration from rural areas to urban centers.

## **Core indicator 5**

*Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes*

### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

### **Do post-disaster recovery programmes explicitly incorporate and budget for DRR?**

No

### **Means of verification:**

\* 0 % of recovery and reconstruction funds assigned to DRR

\* No: Measures taken to address gender based issues in recovery

### **Description:**

There is no permanent dedicated budget for disaster reduction, but an allocating temporary budget is deducted from the general budget of the state to tackle a situation of emergency, and supply internal and external support if it is available. In addition to what it is certified to such matters in the projects of some sectors, and likely most it is a budget made during the incident occurrence and is taken from the General Budget of the State.

UNDP supports Rehabilitation and Reconstruction operations in areas suffering from a disaster like Hadramout, Al-Daffier- Sana'a, Amran

Some assessments of disaster preparedness are currently being developed in Yemen, mostly led by international organizations and NGOs like the IFRC. There are also some social assessments on Climate Change under development, which will result in stronger disaster preparedness

### **Context & Constraints:**

Therefore it is assumed to:

- Develop and implement national policies and plans for environmental emergency procedures at the national and provincial levels and integrating them into the policies of the economic and social development plans and also into the economic, financial and administrative reform programs.
- Move the necessary financial resources and establish an appropriate mechanism to increase the multiplicity and sustainability of financial resources for financing of environmental programs and projects of national and local communities to achieve the objectives of the plan.
- Review and update the structures and regulations and assess the performance and efficiency of the institutional structure and regulatory framework for the environmental sector, environment units and the EPA and to suggest the institutional and regulatory reforms to increase the efficiency, quality, quantity

and to improve the performance and institutional capacities

The challenges faced by the government or national authorities are the lack of significant achievements due to a deficiency in resources and capabilities resulting from the unstable economic and political situation for the state on one hand, and the state's interest in the basic requirements for infrastructure on the other one.

Some of these efforts have had limited results due to limited follow up and ownership of national stakeholders.

## **Core indicator 6**

*Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.*

### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

### **Are the impacts of major development projects on disaster risk assessed?**

Yes

### **Means of verification:**

\* No: Assessments of impact of projects such as dams, irrigation schemes, highways, mining, tourist developments etc on disaster risk

\* Yes: Impacts of disaster risk taken account in Environment Impact Assessment (EIA)

### **Description:**

If the environmental impact assessment study was imposed and implemented, it would incorporate the effects of disaster risk and everything else that is not currently known or not put into mind. So, it is proposed in this area to offer opportunities for the private sector along with providing possible support and motivate them to invest in the environmental field through the establishment of investment national or shared companies in the field of recycling solid and liquid wastes, renewable energy and environment-friendly industries that lead to the preservation of the environment and the provision of primary sources of industry, agriculture and poverty alleviation. We note here that there is a movement toward improving fuel through the project of clean fuel between the General Authority for Environment Protection and Oil company by improving the outputs of oil refineries, that some of them started to apply the proposed criteria.

### **Context & Constraints:**

There are no laws or legislations on this aspect. Therefore, it is necessary to include laws and regulations for the assessment of these effects. It is must also to work on implementing them on reality through activating the laws.

It is proposed that government or national authorities have to take systematic actions to include the procedures for disaster risk reduction in national sustainable development plans in key areas such as combating poverty - housing - water - cleanliness - energy - health - agriculture - infrastructure - the environment, to ensure that the development will not contribute in making future disasters.

## **Priority for action 5**

*Strengthen disaster preparedness for effective response at all levels*

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## Core indicator 1

*Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.*

### Level of Progress achieved:

1: Minor progress with few signs of forward action in plans or policy

### Are there national programmes or policies to make schools and health facilities safe in emergencies?

No

### Means of verification:

\* No: Policies and programmes for school and hospital safety

\* No: Training and mock drills in school and hospitals for emergency preparedness

### Description:

The existence of the project DesInventar which is based on the management of disaster risk reduction by analyzing and evaluating data that was collected from the survey in field and the ability to make future plans and policies to cope with disaster risks.

There is an available mechanism to the General Authority for Maritime Affairs represented in an emergency plan to address marine pollution incidents in the marine environment. It is involved by all the stakeholders and in accordance with their national and institutional responsibilities and competences. Institutional capacities are also available to the Authority for managing and implementing the plan at all levels.

DMP that funded by WB support Yemen to build a sound DRR and Recovery that include three activities :

- A country disaster risk assessment .
- National DRR system including necessary legal strategic formworks to ensure mainstreaming and inter-ministerial and inter-sectoral coordination.
- A series of innovative pilot activities of the local level within specific sectors.

### Context & Constraints:

The most important challenges are the lack of mechanisms and strong institutional capacities for disasters risks management by the guidance to reduce their risks or to support the rehabilitation and dealing with disasters when needed.

- The unavailability of mechanisms and strong institutional capacities for disaster risk management by guidance risk reduction.
- The unavailability of contingency plans at all administrative levels to do regular exercises to test and develop plans to deal with disasters.
- The unavailability of cash reserves and emergency mechanisms to support the rehabilitation and dealing with disasters when needed.
- The lack of procedures for exchanging information during disasters and hazardous events, and during the audits after the incident.

The GoY has collaborated with UNDP to develop a Country Cooperation Frameworks from 1997 to 2006. However, due to a cumbersome executing structure and institutional set up, including indecisiveness and lack of coordination among ministries responsible for the DRM functions, the UNDP-assisted program has stalled for the last several years. In addition, there are limited training for

local government officials, and those that have received partial DRR training are ill equipped and prepared to respond effectively to emergencies

## **Core indicator 2**

*Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.*

### **Level of Progress achieved:**

2: Some progress, but without systematic policy and/ or institutional commitment

### **Are the contingency plans, procedures and resources in place to deal with a major disaster?**

Yes

### **Means of verification:**

\* No: Contingency plans with gender sensitivities

\* Yes: Operations and communications centre

\* Yes: Search and rescue teams

\* Yes: Stockpiles of relief supplies

\* No: Shelters

\* Yes: Secure medical facilities

\* No: Dedicated provision for women in relief, shelter and emergency medical facilities

### **Description:**

In 2007, the Disaster Management Unit in Civil Defense Authority and with the support of the UNDP, has developed a national disaster management draft plan included the role of the Disaster Management Unit and the roles of members of government before and during the disaster. The next step should develop the national plan for disaster emergencies. The new project ups to 1100000 U.S. dollars, and approved by the United Nations Development Program to the civil defense agency in order to strengthen the capacities of the national response.

The environmental emergency draft plan was developed in 2006 by the General Directorate of Environmental Emergencies and Disasters, with the support of the Environmental Unit shared between UNEP OCHA.

The National Plan to face the disaster of oil pollution in the marine environment announced in April 2008, under the supervision of Maritime Affairs Authorities.

There are plans in some parts of the State concerned by humanitarian disasters, such as oil leaks, fire and others, and they are expanded to include dealing with natural disasters during the event occurrence in terms of responsibilities and possibilities for these organizations. So, progress is little with a limited number of indicators of progress in terms of plans and policies.

Plans for dealing with disasters and plans of rehabilitation and reconstruction should benefit from the lessons learned from dealing with previous disasters. They should also benefit from the knowledge of

procedures to reduce the risk so as not to miss risk causes. It should also include actions to reduce disasters risks in qualitative design and implementation for planning

#### **Context & Constraints:**

Scarcity of financial resources, capabilities and competencies.

- The lack of clarity and activation of the legislations in this aspect.
- Government's concentration on completing the infrastructure and basic services.
- Overlapping of responsibilities and roles in the light of the absence of a single responsible authority.
- The lack of studies and research in this aspect.
- Lack of national experience.

It is recommended to adopt a clear policy to avoid all these challenges by conducting meetings, consultations , sincerity for purpose, and putting the national interest above self-interests.

### **Core indicator 3**

*Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.*

#### **Level of Progress achieved:**

1: Minor progress with few signs of forward action in plans or policy

#### **Are financial arrangements in place to deal with major disaster?**

No

#### **Means of verification:**

- \* No: National contingency funds
- \* No: Catastrophe insurance facilities
- \* No: Catastrophe bonds

#### **Description:**

Civil Defense Act allocates 1% of its budget for all government agencies to emergencies, but there is no clear mechanism on how to use these sources.

The National Plan for a catastrophic oil pollution of the marine environment put a mechanism for distributing the cost of implementing this plan among stakeholders. It is important that the Government allocates resources for rapid rehabilitation programs including estimating losses , needs and the necessary capacities to carry out the return basic infrastructure and livelihoods in the aftermath of disasters and to support the capacity of communities to endure until finishing the long-term reconstruction. But Yemen does not take into account any plan to cater for disasters, so a lot of confusion happens when confronting with these surprises, in which it becomes unable to parry them. We rely heavily on external support in such cases.

#### **Context & Constraints:**

Through the challenges faced by the state or national authorities, there are deficiencies in resources, capabilities and competencies. It is advisable to allocate a budget deducted each year from the general budget of the state, and remains in the case of monetary reserves and readiness for emergency situations.

## Core indicator 4

*Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews*

### Level of Progress achieved:

2: Some progress, but without systematic policy and/ or institutional commitment

### Has an agreed method and procedure been adopted to assess damage, loss and needs when disasters occur?

Yes

### Means of verification:

- \* Yes: Damage and loss assessment methodologies and capacities available
- \* Yes: Post disaster need assessment methodologies
- \* No: Post disaster needs assessment methodologies include guidance on gender aspects
- \* No: Identified and trained human resources

### Description:

Information is exchanged among the parties concerned during a disaster or emergency, but it is an autonomous initiative by these sectors without putting perfect plans because of the ambiguity of roles that must be carried out by each sector, and here come the overlap and inaction of these roles. Plans dealing with disasters ,rehabilitation and construction should benefit from the lessons learned from dealing with previous disasters. They should also benefit from the knowledge of procedures to reduce the risks so as not to get lost of their causes. Actions to reduce disaster risks should also be included in qualitative design and implementation for planning and policy.

The current capacity of the Disaster Management Unit (DMU) needs considerable strengthening by way of resources, specialized staff, equipment and training in order to build preparedness at all levels.

### Context & Constraints:

There is a lack of resources, capacities and expertise. Therefore, it is recommended to allocate generous permanent resources for the advancement of establishing of special centers for disaster management, and training cadres who are qualified by scientific research and planning.

Emergency preparedness and response as well as planning for recovery and rehabilitation efforts have been hindered by limited capacity and funding of the NDMU. Additionally the NDMU has been unable to tap into the lessons learned from previous disasters. In order to improve its effectiveness the World Bank is helping reach full Operationalization of the DMU operational rooms, including provision of training to the managers of the operation room, and the calibration of early warning systems.

## Drivers of Progress

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### a) Multi-hazard integrated approach to disaster risk reduction and development

#### Levels of Reliance:

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to

address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

**Do studies/ reports/ atlases on multi-hazard analyses exist in the country/ for the sub region?:**

Yes

**If yes, are these being applied to development planning/ informing policy?:**

No

**Description (Please provide evidence of where, how and who):**

Environmental Act No. 96 of 1995, devotes a chapter for the environmental impact assessment in development projects. Most of this chapter focused on the regular environmental problems, but there is no reference to the concept of DRR.

There are geological studies on geological hazards in the country, especially in landslides, but they did not reach the application stage in terms of the implementation of treatments and necessary precautionary measures.

There are field that require more efforts or emphasis in the coming years and to estimate required types of investments or strategies in order to focus the efforts of disaster risk reduction and rehabilitation on the motor-related measures. They are as follow:

1. Tendency to reduce the risk of disasters and development that takes into account the multi-hazard ones and rehabilitation and gender issues.
  2. Identifying and strengthening the capacities to reduce risks and restore balance.
  3. Sponsoring the partnerships at all levels with private sector and NGOs ,UN organization and the international Organizations.
  4. Providing financial support to update the monitoring and studies and early warning systems 8.
- Supporting the development of websites and specialized links and publishing materials for the seismic, volcanic, torrential rains and floods risks.

There are no comprehensive studies or atlas on the multi-hazards in Yemen.

There is potential to improve collaboration among public and private sectors in Yemen, including amongst international donors, for more comprehensive programs for DRM. The World Bank is currently preparing a multi-sector DRMP ensuring that prevention, mitigation, and response responsibilities are allocated to the most suitable Ministries and Governmental agencies.

**b) Gender perspectives on risk reduction and recovery adopted and institutionalized**

**Levels of Reliance:**

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

**Description (Please provide evidence of where, how and who):**

Yemen depends in this regard on the results of the general population censuses, by inventorying of males and females and to take this data as a basis for some of what is planned or what they are supposed to face. Yemen took advantage from this to face the disaster girls' reluctance from education by building schools that meet the requirements of girls, particularly in positions of dispersion of population. This data also contributed to shed light on some of the humanitarian risks faced by girls in Yemen such as early marriage , birth rates, death of both sexes and so on. But, there are no formal institutions that care about this in an organized way. Some sectors may do that like hospitals. It is required to establish specialized centers at all levels after the identification of problems in different

categories according to their types.

### **c) Capacities for risk reduction and recovery identified and strengthened**

#### **Levels of Reliance:**

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

#### **Description (Please provide evidence of where, how and who):**

Regarding the local level, it is unable to implement these ambiguous regulations, until now, at the government level. This inability is due to the lack of qualification, training in this aspect and at the state level.

The main areas that require further efforts are :

- 1 - Drawing attention to a combination of personal, local and national efforts to recognize the concept of disaster reduction through planning, implementation and evaluation.
- 2 - Moving from the concept of disaster reduction to the concept of recovery and the necessary compensation.

According to the Maritime Affairs that there are more areas that require further efforts, especially in capacity building (training - support the monitoring techniques and control of disasters) as well as technology transfer and exchange of information by adopting strategies at the level of various sectors in which to assess the available capacities to it and shortcomings and identifying requirements.

### **d) Human security and social equity approaches integrated into disaster risk reduction and recovery activities**

#### **Levels of Reliance:**

No/ little reliance: no acknowledgement of the issue in policy or practice; or, there is some acknowledgement but nothing/ little done to address it

#### **Description (Please provide evidence of where, how and who):**

The most important areas to focus upon are: establishing enough schools for orphans and the needy who are unable to educate and accommodate themselves. It can be making them geniuses in the future and depend on them in nation-building, if they received proper care, and got drawn to their talents and abilities

### **e) Engagement and partnerships with non-governmental actors; civil society, private sector, amongst others, have been fostered at all levels**

#### **Levels of Reliance:**

Significant and ongoing reliance: significant ongoing efforts to actualize commitments with coherent strategy in place; identified and engaged stakeholders.

#### **Description (Please provide evidence of where, how and who):**

During this period and through the National Focal Point relevant sectors were integrated including the private sector. Cooperation is conducted in terms of sharing experiences and participating in events and related activities. But this mechanism is still emerging and did not include plans and integrated activities to reduce disaster risk in the alleged manner.

The main areas that require more efforts or emphasis in the coming years are the partnership sponsorship with the non-governmental sector, civil society and private sector at all levels, community participation, putting trends based on participation by effective utilization of mechanisms that already

exist and are useful in supporting knowledge and capacities of the community. Partnerships between public and private sectors are an important tool in reducing the risk of disasters. The members of these partnerships are public authorities such as governmental agencies, academic institutions, educational or non-governmental organizations with commercial organizations such as corporations, unions and private foundations. These partnerships offer opportunities to combine resources and expertise to work together to reduce risks and losses, which in turn will enhance the reliability of the community and reduce vulnerability. Activating this issue requires conducting awareness campaigns, workshops and meetings with private companies to persuade them by the importance of such partnerships.

## **f) Contextual Drivers of Progress**

### **Levels of Reliance:**

Partial/ some reliance: Full acknowledgement of the issue; strategy/ framework for action developed to address it; application still not fully implemented across policy and practice; complete buy in not achieved from key stakeholders.

### **Description (Please provide evidence of where, how and who):**

- Building national capacities.
- Providing necessary financial and technical support.
- Enacting, amending and enforcing legislations and laws.
- Supporting the national team and the national focal point to become an independent and sovereign state on the side of disaster reduction.
- Spreading awareness at all levels.
- conducting a unified national network.
- Risk assessment and the work of surveys.
- Information gathering and analysis.
- Rehabilitation of local communities.
- Provision of hardware and the necessary equipment.
- Resource development and institutional capacity.
- Attracting supporters from leaders and decision makers to reduce the risk of disasters.
- Taking care of regulations of safety during the establishing of schools, hospitals and important infrastructure.
- Building sound strategies for rehabilitation, or including mechanisms for disaster risk reduction in the national plans for development.

## **Future outlook**

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### **Area 1**

*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.*

### **Overall Challenges:**

Yemen faces many challenges in all areas of the state strategy, because of political and economic situation and the widespread of poverty, ignorance, and administrative and financial corruption, it does not fall within the priorities of the state that are still facing a defect in completing the infrastructure and development projects and the challenges being faced are as follow:

- Lack of awareness locally and nationally.
- Scarcity and quasi-absence of the financial resources on the level of the state budget.
- The lack of national experience and local communities ,and technical capabilities and new equipment.

- Lack of coordination and exchange of information between the relevant authorities.
- The absence of the historical information of the region.
- The concept of DRR is not defined within the overall structure of the state.
- The absence of an independent authority dealing with issues of natural and man-made disasters to avoid overlapping jurisdictions as a reflection on the inadequacy of legislations and laws.
- Failure to complete the government's ability to move from centralization to decentralization for the application of local government.

The studies of the Intergovernmental Panel on Climate Change held in 2007 concluded that in 2100 will witness a lot of events and challenges as a result of global warming and greenhouse gases, as follows:

- Increase the level of ocean acidity.
- Increased rates of heat / heat waves.
- Increasing the rate of sea level 18-19 cm.
- It is expected that rainfall will increase in the areas of high latitudes and decline in the areas of low latitudes .
- Intensity of the tropical cyclones and increasing rainfall accompanied by high sea surface temperatures, and Yemen, by virtue of its geographical location on the Red and the Arabian Seas, Gulf of Aden and the Indian Ocean is at risk of climate change.

#### **Future Outlook Statement:**

Yemen looks forwardly to perform its duties towards the issue of disaster risks reduction locally, nationally, regionally and internationally if they exceed their challenges. It seeks to : establish an independent authority on matters related to DRR represents all sectors to get international official interaction and implementing the Government's related plans. But The deteriorating economic situation and their inability to bear the financial burden stands in the way of establishment of this authority. Yet, it continues in this role according to its capabilities through the National Focal Point and all partners.

The most important priorities for Yemen are to overcome the technical ,financial and coordinating obstacles, and moving to the national and local government readiness to face disasters and dealing with them by the development of EWS and raising public awareness about the damages of climate change and expanding public participation , provision of the technical and financial resources, qualifying capacities and developing laws, and to continue cooperation with the international organizations, friendly governments and donors to benefit from their experience. It is worth mentioning here that Yemen is currently encouraging the national team through the national focal point; to support and guide the Government in what to do about this issue.

- Enact legislations that limit the emission of greenhouse gases.
- Re-Urban Plan and care about the healthy and technical conditions and standards for housing and facilities.
- establish gardens, public parks and water barriers / rain water harvesting and industrial facilities that are far away from population centers.
- launch A forestation campaigns and regular care of trees exploited. This comes after the provision of renewable sources of water that constitute the main problem

## **Area 2**

*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.*

#### **Overall Challenges:**

The main challenges are :

- Raising awareness of disaster risk to society in general and youth groups and students in particular.

This comes after convincing and raising awareness of the decision makers.

- Supporting the institutional building ,capacity-building and achieving the highest standards of efficiency, and qualitative and quantitative performance.
  - To achieve a fair balance between the requirements of development and the requirements for maintaining the environment and natural resources.
  - Capacity-building at all levels.
  - Activating the legislations and laws governing the conduct of disaster risk reduction.
  - Provision of equipment and supplies for the remote sensing and early warning systems and to focus on disaster-prone areas and also the vulnerable ones.
  - Encouraging community self-initiatives to address disaster risks.
- Enhance technical and management capacities in disaster management.

#### **Future Outlook Statement:**

Building the capacities of civil society organizations that focus their activities in emergencies and crises and related fields and to strengthen institutions, mechanisms and capacities to build the capacity of endurance of the risks.

According to UNDP, national and local capacities, disaster preparedness, mitigations and responses enhanced to minimize impact of natural disaster and peoples live hoods.

### **Area 3**

*The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery programmes in the reconstruction of affected communities.*

#### **Overall Challenges:**

The main challenges are :

- Identifying common challenges to achieve the priorities outlined for all the strategic goals.
- Making a statement on the future vision that outlines the future direction to be adopted by the objectives of disaster risk reduction.
- To integrate special concepts and ideas for preventing risks in the curricula of public education.
- Promoting initiatives on scientific research and innovation.
- Changing the wrong behaviors and the disorganized consumption patterns.

#### **Future Outlook Statement:**

Yemen looks forward to develop the material institutions , the intellectual planning mechanisms ,scientific research and humanitarian capacities and competencies to build wide and flexible capabilities to face hazards, through the integration of the local community and national and regional organizations, international and friendly countries, donors, and building an information base for natural and human hazards internally and externally. and to draw an organized scientific pattern to face all risks with the multi-source support, internally and externally, taking into account risk recovery according to their priorities and to focus on the preventive aspect so as to avoid the curative one, and also to focus on the ways of recovery and adapting with incidents.