Disaster Risk Reduction

الحد من مخاطر الكوارث
The Economic and Human Impact of Disasters* in the last 12 years

$1.3 TRILLION DAMAGE (USD)

2.7 BILLION AFFECTED

1.1 MILLION KILLED

United Nations International Strategy for Disaster Reduction
https://www.unisdr.org

*Disasters refers to Natural Disasters as categorized in EM-DAT
Data source: EM-DAT - The OCHA/CREG International Disaster Database
Data version: 10 January 2013 - v13.07
Impacts of Disasters since the 1992 Rio de Janeiro Earth Summit

In 1992, the United Nations organized a conference on environment and development in Rio de Janeiro, called the Earth Summit. The purpose of the conference was to rethink economic growth, advance social equity and ensure environmental protection.

Twenty years later, the UN is organizing Rio+20, a chance to move away from business-as-usual and to end poverty, address environmental destruction and build a bridge to the future. Disaster risk reduction (DRR) plays an important part in this future of sustainable development.

Here’s a look at the impact of disasters since the Earth Summit (1992-2012).

Impact by disasters

Impact by top 10 countries

China
2.5 BILLION people affected

USA
560 BILLION in damage (USD)

Haiti
230675 people killed
Based on historical data on disasters…. Natural hazards causing disaster events are on the rise!
Why do we need disaster risk reduction?
Hazard = A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

خطر (أخطار): ظاهرة أو مادة أو نشاط بشري أو ظروف خطيرة يمكن أن تؤدي إلى خسارة في الأرواح أو إصابات أو آثار صحية أخرى أو ضرر بالممتلكات أو خسارة في سبل المعيشة والخدمات أو خلل اقتصادي واجتماعي أو ضرر بيئي.

This Rock = a Hazard....
An Earthquake = a Hazard
Vulnerability = The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

القابلية للتضرر: 
سمات وظروف المجتمع أو المنظومة أو الممتلكات التي تجعلها سهلة التأثر وقابلة للتضرر بالمخاطر.
Disaster = A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

الكارثة:

اضطراب في آداء المجتمع أو التجمعات يتضمن خسائر كبيرة وآثار سلبية على الأرواح والنواحي المادية والاقتصادية والبيئية التي تفوق قدرة المجتمع أو التجمع العمراني المتأثر على مواجهتها باستخدام موارده الذاتية.
Disaster Risk = The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

مخاطر الكوارث:
الخسائر المحتملة في الأرواح والوضع الصحي وسبل المعيشة والممتلكات والخدمات التي يمكن أن تصيب مجتمع أو تجمع ما بسبب الكوارث، في فترة زمنية مستقبلية محددة.

Disaster Risk = Hazards & Vulnerability
Understanding the Nature of Disaster Risk

**Socio-economic**
- poverty,
- unplanned urban growth,
- lack of awareness and institutional capacities...
- traditions and cultures

**Physical**
- insufficient land use planning,
- Housing quality, building codes
- infrastructures location in hazard prone areas.. and quality

**Environmental degradation**
- ecosystem degradation;
- coastal (watershed, marshland...), etc.
- waste of natural resources

**HAZARDS**
- Earthquake
- High winds (cyclone/hurricane/typhoon)
- Flooding
- Volcanic Eruption
- Landslide
- Drought
- Virus and pests
Risk (R)  
Probability of harmful consequences, or expected losses resulting from interactions between natural or human actions (hazards) and vulnerable conditions.

Hazard Exposure (H)  
Exposure to a potentially damaging physical event, phenomenon or human activity.

Vulnerability (V)  
Conditions and processes resulting from physical, social, economical and environmental factors, which increase susceptibility to impact of hazards.

\[ R = H \times V \]

Disaster Risk “R” = The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.
Risk can be managed.... Risk is only a “probability”
When we ignore it then it turns into a disaster !!!
Poor planning, fragile buildings & infrastructure = HIGH RISK

Earthquake in a deserted land will not kill.... But when it strikes a vulnerable city with fragile housing, poor infrastructure, no preparedness, no awareness, no emergency and response plans and poor coordination, then it will kill & damage!
Disaster Risk Reduction (DRR)

There is no such thing as a 'natural' disaster, only natural hazards.

- Disaster Risk Reduction (DRR) aims to reduce the damage caused by natural hazards like earthquakes, floods, droughts and cyclones, through an ethic of prevention.

يهدف الحد من مخاطر الكوارث الى تقليل الأضرار الناتجة عن الأخطار الطبيعية كالزلازل والفيضانات والجفاف والأعاصير وغيرها من خلال "ثقافة الوقاية" للوقاية
What is disaster risk reduction?
How can we integrate disaster risk management approach into development?

1. Establish context  ..........  *What are we trying to do?*
2. Identify risks.........  *What can happen?*
3. Analyse risks ..........  *What effects will they have?*
4. Evaluate risks ..........  *Which are most important?*
5. Accept risk ..........  *Should we spend resources on this?*
6. Treat risk ..............  *What can we do about this?*
7. Monitor / review ..........  *Has it worked? Is it still the best solution?*
8. Communicate & consult  .  *Has everyone been involved?*
**RE-FOCUS: from disaster management only to Disaster Risk “Management” and Reduction**

- **Emergency management** → **Development**
- **Concerned with Hazards** → **Focus on Vulnerability**
- **Re-active** → **Proactive**
- **Single agencies** → **Partnerships**
- **Only Early Warning** → **Multi-disciplinary**
- **Response Management** → **Risk management**
- **No Coordination** → **Coordination**
Why disaster risk reduction?

- Minimize losses and damages from hazards
- Reduce existing vulnerabilities by addressing root causes
- Strengthen existing capacities to manage impacts of disasters
- Protect development investments
- Holistic approach, multi-hazard, multi-stakeholder
- Applicable before, during and after disasters
- Build back better – during recovery
- Build resilience of nations and communities
Agenda in Progress

1989: UN International Decade for Natural Disaster Reduction (IDNDR 1990-1999)
1994: 1st World Conference & Yokohama Strategy / Plan of Action
2000: UN International Strategy for Disaster Reduction (UNISDR)
2002: World Summit on Sustainable Development (WSSD) - Johannesburg Plan of Implementation
2005: 2nd World Conference – Hyogo Framework for Action
2007: 1st session of Global Platform for Disaster Risk Reduction
2009: 1st Global Assessment Report on Disaster Risk Reduction
2009: 2nd session of Global Platform for Disaster Risk Reduction
2010: Arab Strategy for Disaster Risk Reduction
2011: 2nd Global Assessment Report and 3rd Global Platform
2013: 3rd Global Assessment Report and 4th Global Platform
2015: 3rd World Conference – “New” DRR Framework / HFA II
What is the Hyogo Framework for Action?

Hyogo Framework for Action priorities for action

1. **Make Disaster Risk Reduction a Priority**
   
   Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation

2. **Know the Risks and Take Action**
   
   Identify, assess, and monitor disaster risks - and enhance early warning

3. **Build Understanding and Awareness**
   
   Use knowledge, innovation, and education to build a culture of safety and resilience at all levels

4. **Reduce Risk**
   
   Reduce the underlying risk factors

5. **Be Prepared and Ready to Act**
   
   Strengthen disaster preparedness for effective response at all levels
ملخص إطار عمل هيوغو في الفترة ما بين (2005-2025)
بناء قدرة الأمم والمجتمعات على مواجهة الكوارث

النتائج المتوقعة والأهداف الإستراتيجية وأولويات العمل

الإحصاء المتوقع

الأهداف الإستراتيجية

- التعرف على الحاجة إلى الإغاثة في完成后ية في تصميم وتنفيذ برامج التأهب للطوارئ، والتصدي لها وتفعيلها.
- استجابة وتعزيز المؤسسات والآليات والدورات التي يمكن أن تسهم على نحو متصدري في بناء القدرة على مواجهة الأخطار.
- تعزيز الإجماع المتعلق بإحصائيات خطر الكوارث في سياسات التنمية المستدامة والخطط.

أولويات العمل

- تحديد الحاجة للتدريب والتطوير، وتعليم الأفراد والمؤسسات على مواجهة الكوارث على جميع المستويات.
- تطبُّق الخطط الوقائية وتأشيرة تأهيلية.
- تطبيق التشريعات، وال политикات والسياساتوان.
- تنظيم مشاريع دومانية متنوعة، ومشاريع متنوعة.
- تطوير الدورات التدريبية، وإدارة التدريب، والبرامج التدريبية.
- تنفيذ استراتيجيات الحماية ضد الكوارث.
- تبادل المعلومات والمعلومات، والخبرات، وتبادل الأفكار.
- إعداد خطة متكاملة، وتدقيق الأهداف، وتنفيذ 프罗斯.
Disaster Risk Reduction Cycle

- Prevention
- Mitigation
- Preparedness
- Disaster
- Response
- Recovery
- Reconstruction
Disaster Risk Reduction is Everybody’s Business

"The more governments, UN agencies, organizations, businesses and civil society understand risk and vulnerability, the better equipped they will be to mitigate disasters when they strike and save more lives"

Ban Ki-moon, United Nations Secretary-General
More Information can be found at:

www.unisdr.org

www.preventionweb.net/gar