The Multi-Dimensional Risk Analysis – climate and disaster risks to achieving the Sustainable Development Goals

Part of the full Training Package on Integrating DRR and Climate Change Adaptation in the UN Sustainable Development Cooperation Framework
Climate changes and disasters disrupting development

Disaster Impacts:

- Reported disasters: 4,212 vs. 7,348
- Total deaths: 1.19 million vs. 1.23 million
- Total affected: 3.25 billion vs. 4.03 billion
- US$ Economic losses: 1.63 trillion vs. 2.97 trillion
Climate and disaster risk and the broad range of hazards

Heatwave
Cold Snap
Volcanic activity
Tropical Cyclones

Storms
Floods
Landslides
Earthquake
Drought

Infectious diseases
Invasive species
Insect infestations
Human-animal conflict
Toxins

Chemical incidents
Nuclear incidents
Radiological incidents
Heavy metal contamination
Cyber Hazards

Salinization
Desertification
Biodiversity loss and deforestation

Sea level rise
Ocean acidification
Increasing temperature
NATURAL HAZARDS
Storms, Tropical Cyclones, Floods, Landslide, Fires, Tsunami, Earthquake, Drought, Heatwave, Cold Snap, Volcanic Activity

Causes loss of life and damages assets, infrastructure, settlements and ecosystems, and can trigger displacement

Losses and damage disrupt economic activities and governance, and access to basic services and education

Asset loss, livelihood and service disruption entrench multi-dimensional poverty and inequalities, and can trigger migration
Climate and disaster impacts on development
The CCA Multi-Dimensional Risk Analysis (MDRA)

Common Country Analysis: Multi-Dimensional Risk Analysis

“...the CCA should examine the probability, impact and priority of existing, emerging and future risks on a country’s development trajectory, particularly its impact on those furthest left behind...”

SDG-Based Risk Framework

- Political stability
- Democratic space
- Social cohesion, gender equality and non-discrimination
- Regional and global influences
- Internal security
- Justice and Rule of Law
- Infrastructure and access to social services
- Displacement and migration
- Public health
- Food security, agriculture and land
- Environment and climate
The Guidance Note on Integrating DRR and Climate Change Adaptation in the UNSD Cooperation Frameworks

- Explainers: how disasters affect different areas of development
- Guidance: Sources to inform climate and disaster risk analysis
- Examples: Early warning indicators
- Risks to each SDG
Practical Exercise

Climate and disaster risk and the SDG Risk Framework
Practical Exercise – Presentation Template

- Five groups – 20 minutes to work, 10 minutes to present

- Task:
  1. List the most significant natural, biological, and technological, and slow-onset climate change-related hazards nationally
  2. Using your own knowledge and Appendix 1 of the Guidance Note, identify climate and disaster risks to the assigned SDG risk framework areas.

- Assigned SDG Risk Framework areas:
  - Group A: Political Stability, Democratic Space, and Social cohesion, gender equality and non-discrimination
  - Group B: Regional and global influences, Internal Security
  - Group C: Justice and rule of law, and Infrastructure and access to social services
  - Group D: Displacement and migration, and Public health
  - Group E: Food security, agriculture and land, and Environment and climate
### Practical Exercise – Presentation Template

<table>
<thead>
<tr>
<th>Hazard</th>
<th>How can it can interact with the risk area</th>
<th>Risk management intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDG Risk Area 1: [fill in]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDG Risk Area 2: [fill in]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Practical Exercise – Presentation Example

<table>
<thead>
<tr>
<th>Hazard</th>
<th>How can it interact with the risk area</th>
<th>Risk management intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SDG Risk Area: Social cohesion, gender equality and non-discrimination</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pandemic (COVID-19)</td>
<td>Loss of jobs due to COVID-19 shut-downs leading to reversal of women's economic empowerment.</td>
<td>Strengthen private sector resilience, vocational re/training for women, social safety nets.</td>
</tr>
<tr>
<td>Drought</td>
<td>Increased competition over water leading to social tension in affected areas.</td>
<td>Anticipatory action, livelihood diversification.</td>
</tr>
<tr>
<td><strong>SDG Risk Area: Infrastructure and access to social services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flooding</td>
<td>Sustained flooding preventing vulnerable groups from accessing basic health care.</td>
<td>Resilient transport networks, business continuity planning capacity development for health services.</td>
</tr>
<tr>
<td>Earthquake</td>
<td>Destruction of critical infrastructure leading to disruption of basic services and economic activity.</td>
<td>Retrofitting of existing infrastructure and buildings, zoning and building codes.</td>
</tr>
</tbody>
</table>
Summary and conclusion

- Risk-blind investment = systemic risk
  - Entrenches existing risk
  - Perpetuates vulnerability of excluded and marginalized people
  - Generates new risks

- $1 invested in risk reduction and prevention can save up to $15 in post-disaster recovery.

- Risk-informing the Strategic Development Solutions in the Cooperation Frameworks is vital for sustainability in climate emergency
Thank you

Download the Guidance Note from:

For more information, please contact your UNDRR Regional Office:
https://www.undrr.org/about-undrr/where-we-work