



**Asia-Pacific  
Economic Cooperation**

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## **APEC Disaster Risk Reduction Framework**

# DISASTER RISK REDUCTION FRAMEWORK

## *Building Disaster-Resilient Economies for All*

### Context

1. In 2020, our leaders endorsed the APEC PUTRAJAYA VISION 2040 of building an open, dynamic, resilient and peaceful Asia-Pacific community by 2040, for the prosperity of all our people and future generations, outlining “We will promote economic policies, cooperation and growth which support global efforts to comprehensively address all environmental challenges, including climate change, extreme weather and natural disasters, for a sustainable planet.”
2. The APEC Disaster Risk Reduction Framework (DRRF) serves as the driving force of APEC’s efforts to address the growing complexity and frequency of natural disasters impacting economic growth in the region. Since its endorsement in 2015, the DRRF has helped strengthened emergency preparedness amid the emergency management landscape that characterizes the Asia-Pacific.
3. Most APEC economies are situated in the Pacific Ring of Fire, where strong earthquakes, tsunamis, and volcanic eruptions pose constant threats. The region has the most active tropical cyclone formation in the world in terms of frequency, including the Category 5 cyclones or super typhoon occurrences per year. These conditions are further exacerbated by climate change. The Asia-Pacific Region is experiencing temperature changes in the Pacific Ocean, resulting in El Niño and La Niña phenomena.
4. Over the past decade, catastrophic disasters have caused mounting economic losses and widespread shocks<sup>1</sup>. Disaster-related losses induced by natural hazards result in an estimated USD 100 Billion annually in the Asia-Pacific Region, which accounts for more than 70% of global disasters.<sup>2</sup>
5. APEC leaders have expressed their commitment to building a more disaster resilient region for all (**ANNEX A**).
6. Updating the APEC DRRF and its associated APEC DRR Action Plan (DRRAP) reinforces existing efforts to advance sustainability, inclusion, and resilience in Asia-Pacific. This refresh maintains the core tenets of the original version of the Framework, incorporates best practices and lessons applied from relevant international arrangements—where appropriate—and assesses shared challenges to inform APEC’s future disaster risk reduction activities.
7. Noting the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030, which recognizes the significant role of regional cooperation in risk reduction, and further considering the outcome of the Midterm Review of the Implementation of the SFDRR; we recognize global progress toward reducing disaster risk, while expressing our commitment to addressing gaps and challenges that impact our collective ability to effectively prepare for, respond to, and recover from disasters.

### Purpose of APEC DRR Framework

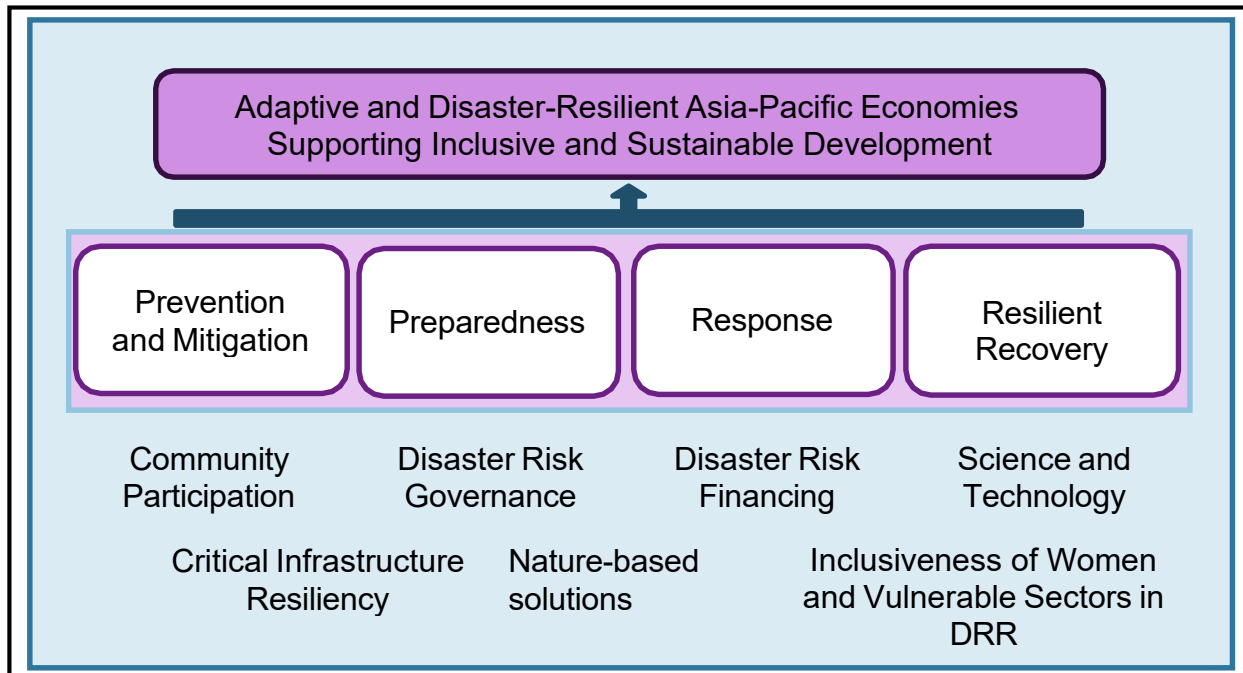
1. The APEC DRR Framework aims to support APEC economies’ efforts to build sustainable, inclusive, and resilient Asia-Pacific communities by reducing disaster risk and strengthening emergency preparedness for disasters.

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<sup>1</sup> [2023 Weather, Climate and Catastrophe Report: APAC Insights \(aon.com\)](https://www.aon.com)

2. This Framework acknowledges that addressing disaster impacts requires holistic, forward-leaning, proactive, multi-stakeholder, multi-sectoral and strategic interventions to make our economies more resilient. Under this Framework, APEC can collectively identify and explore areas for enhanced cooperation.
3. The APEC Framework cuts across all areas of the APEC agenda, including agriculture; forestry; fisheries; trade and investments; energy; micro, small, and medium enterprises (MSMEs); infrastructure development; critical infrastructure resiliency; financial resiliency; human capital; health; gender; food security; science and technology; and nature-based solutions.

### The APEC Disaster Risk Reduction Framework



### Four Pillars of APEC Disaster Risk Reduction

4. The APEC DRRF consists of four interoperable and mutually reinforcing pillars, namely: Prevention and Mitigation, Preparedness, Response, and Resilient Recovery. These pillars correspond to the four elements vital for ensuring achievement of the overall aim to build disaster resilient economies for all (**ANNEX B**).

### Supporting Principles and Enabling Environment

5. The APEC DRRF is supported by a set of principles that create an enabling environment for economies to advance disaster risk reduction. Hence, the DRRF is anchored on the principles of *Community Participation, Disaster Risk Governance, Disaster Risk Financing, Innovations on Science and Technology, Critical Infrastructure Resiliency, Nature-Based Solutions, and Inclusiveness of Women and Vulnerable Sectors in DRR* (**ANNEX C**).

### Areas for Collaboration

6. Building on the substantial DRR-related efforts that APEC has carried out over the years and involving all relevant APEC fora, the APEC DRRF identifies key areas for collaboration (**ANNEX D**).
7. The private sector, through the APEC Business Advisory Council (ABAC) and local and

regional businesses, plays an essential role in this APEC Framework. Sustainable development highly encourages collaboration between the public and the private sectors in recognition of their shared responsibility towards disaster resiliency. As an example, the continuity of businesses and MSMEs largely depends on the efforts of our private sector partners. Their continued and sustained contribution toward the

development of livable cities and sustainable communities, resilient supply chains, infrastructure connectivity, and energy will help ensure the success of DRR cooperation and its requisite interventions.

## **Call to Action**

8. Extreme weather and the widespread impacts of climate change pose significant risks to communities across the Asia-Pacific region. Taking decisive and collective action to address disaster risk and enhance emergency preparedness is critical to the future of the APEC region.
9. To translate into action the vision and declarations of our Leaders for DRR collaboration, and to move towards enhancing disaster resiliency in the Asia-Pacific region, the following actions are hereby called for:
  - 9.1. This updated Framework will facilitate collective work in building resilient communities and to serve as one of the foundations for dynamic and sustainable growth. To achieve this, we call for the conduct of regular APEC high level policy dialogues—focused on DRR.
  - 9.2. We encourage cooperation with other relevant organizations to promote regional efforts in emergency preparedness and disaster risk reduction.
  - 9.3. We encourage efforts to strengthen cooperation in dealing with disasters as embodied in the APEC DRR Framework. In this light, we welcome voluntary joint commitments and/or voluntary multi-party arrangements between economies and partners toward DRR, as deemed suitable and where appropriate, in recognition of the unique context, situation, and nuances in member economies.
  - 9.4. We commit to continue implementing the APEC DRRAP. The DRRAP serves as the implementation, monitoring and evaluation tool for the realization of the DRRF and functions as a roadmap for the attainment of shared disaster priorities.

By identifying a set of targets contextualized for the Asia-Pacific region, the DRRAP complements but does not duplicate efforts outlined in other international arrangements.

In support of the DRRF and the DRRAP, the Emergency Preparedness Working Group (EPWG) coordinates the implementation of the DRRAP and serves as the primary collection mechanism for specific, measurable, and timed contributions from all economies. Consistent with APEC guidelines, the DRRAP is formulated to include appropriate monitoring and evaluation tools that help measure all EPWG activities.

## **ANNEX A – APEC LEADERS’ PAST DECLARATIONS AND STATEMENTS**

1. The Asia-Pacific Economic Cooperation (APEC) was established based on a spirit of community among the peoples of the Asia-Pacific region. This spirit of community, which our Leaders enunciated at Blake Island, Seattle in 1993, inspires us to collectively search for solutions to the common challenges that we face. The vision of an APEC community became clearer when our Leaders committed in 1994 in Indonesia to attain the Bogor Goals of free and open trade and investment. Further, at Subic, Philippines in 1996, our Leaders upheld sustainable growth and equitable development as the ultimate objectives of our individual and collective endeavors.
2. In 1997, our Leaders acknowledged in Vancouver, Canada the collective impact of disasters on the APEC economies. When a disaster strikes in one APEC economy, the rest of the community is affected.
3. In 2007, our Leaders reiterated in Sydney, Australia their recognition of the region’s vulnerability to disasters by highlighting the nexus among economic growth, energy security, and climate change. They committed to bold aspirational targets including reducing energy intensity by at least 25% by 2030 (later increased to 45% by 2035 in 2011) and increasing the forest cover in the region by at least 20 million hectares by 2020.
4. In 2008, our Leaders articulated in Lima, Peru the importance of promoting disaster risk reduction (DRR) through the adoption of the APEC Principles on Disaster Response and Cooperation. They reiterated the need for cooperation on DRR among our economies.
5. In 2009, our Leaders recalled in Singapore the targets set forth in 2007 and committed to enhance work to meet those targets. Further, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), which all ten member states of ASEAN ratified in 2009, also served as useful and ground-breaking guide in developing effective and comprehensive regional DRR mechanisms.
6. In 2010, our Leaders reiterated in Yokohama, Japan their commitment to take strong and action-oriented measures to address the threat of global climate change. They committed to develop practical disaster risk management mechanisms to strengthen the ability of our economies to manage emergencies and natural disasters.
7. In 2011, our Leaders pledged in Honolulu, Hawaii to involve the private sector and civil society in APEC’s emergency preparedness efforts.
8. In 2012, our Leaders expressed in Vladivostok, Russia the support for further steps such as facilitating business continuity and resiliency planning, especially among small and medium enterprises; establishing common standards for emergency early warning systems in cross-border transportation; and promoting integrated disaster risk financing policies.

9. In 2013, our Leaders articulated in Bali, Indonesia the need to undertake urgent actions to prevent the grave economic consequences of natural and human-induced disasters.
10. In 2014, our Leaders agreed in Beijing, China to encourage further enhance co-operation including more robust networking among disaster management agencies, improving supply chain resiliency, reducing barriers to the movement of emergency responders and humanitarian relief across borders, increased data sharing, and the application of science and technology.
11. In 2015, our Leaders adopted in Pasay, Philippines the **APEC DRR Framework (DRRF)**, primarily to address the pressing concerns resulting from the persistence of disasters in the Asia-Pacific region and committed to crafting an action plan. Furthermore, Leaders emphasized the growing need for strengthening collaboration on early warning systems, search and rescue, post-disaster recovery, as well as promoting business continuity planning, initiating the trade recovery communications system, promoting appropriate donations after disasters, and fostering community-based disaster risk management to ensure that communities can economically recover and supply chains can be restored.<sup>3</sup>
12. In 2016, our Leaders approved in Lima, Peru the **APEC DRR Action Plan (DRRAP)**, which advances the four pillars outlined in the DRRF and provides a roadmap for implementation and continuous monitoring and evaluation.<sup>4</sup>
13. In 2017, our Leaders acknowledged in Da Nang, Viet Nam EPWG's recommendation to enhance inter-regional cooperation and advance technology, innovation and application for effective emergency response. EPWG also highlighted a regional synergy in applying advanced technologies for better emergency preparedness and in exploring APEC-wide solutions to enhance disaster risk management and securing economic development.<sup>5</sup>
14. In 2018, our Leaders encouraged in Port Moresby the continued implementation of the APEC DRRF and DRRAP and stressed the importance of developing disaster risk financing in support of APEC's resilience to emergency management.
15. In 2019, as part of the APEC Chile Host Year, our Leaders supported the development of **La Serena Roadmap for Women and Inclusive Growth (2019-2030)**, which aligns with the DRRF and provides EPWG with guidance on how to ensure the inclusion of women—often disproportionately impacted by disasters—in disaster risk reduction and emergency preparedness efforts.
16. In 2020, as part of the APEC Malaysia Host Year, our Leaders reinforced APEC's commitment to strengthen our economic and technical cooperation to deliver economic policies that complement our efforts to achieve sustainable development and address all environmental challenges, including climate change, extreme weather, and natural disasters. Furthermore, our Leaders endorsed the **APEC Putrajaya Vision 2040**, which calls for greater cooperation to advance emergency preparedness and disaster risk reduction in support of a more sustainable planet.<sup>6</sup>
17. In 2021, as part of the APEC New Zealand Host Year, our Leaders adopted the **Aotearoa Plan of Action**, which calls for cooperation in relevant APEC fora—

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<sup>3</sup> [2015 APEC Ministerial Meeting | APEC](#)

<sup>4</sup> [Emergency Preparedness | APEC](#)

<sup>5</sup> [Microsoft Word - Joint Recommendation- Final 22 September 2017 Approved by 11th SDMOF \(apec.org\)](#)

<sup>6</sup> [APEC Putrajaya Vision 2040 | 2020 Leaders' Declaration | APEC](#)

including EPWG—to develop, encourage and exchange best practice policies, and promote capacity building programmes, that address all environmental challenges—including climate change—and support sustainable growth, such as through the implementation of the APEC DRRF.<sup>7</sup>

18. In 2022, our Leaders agreed in Bangkok, Thailand to the adoption of the **Bangkok Goals on Bio-Circular-Green (BCG) Economy**, which call for the support of global efforts to comprehensively address all environmental challenges, including climate change, extreme weather and natural disasters, for a sustainable planet, particularly in terms of climate mitigation, adaptation and resilience through a number of actions, including enhancing adaptive capacity, strengthening resilience and reducing vulnerability to the adverse effects of climate change and associated risks, including through mainstreaming adaptation measures into policies, strategies and planning, as well as disaster and emergency preparedness and management.<sup>8</sup>

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<sup>7</sup> [Aotearoa Plan of Action \(apec.org\)](https://www.apec.org/press-releases/2022/02/22-apec-epwg-plan-of-action)

<sup>8</sup> [Bangkok Goals on Bio-Circular-Green \(BCG\) Economy | 2022 Leaders' Declaration | APEC](https://www.apec.org/press-releases/2022/02/22-apec-2022-leaders-declaration)



## ANNEX B – FOUR PILLARS OF DISASTER RISK REDUCTION

1. **Prevention and Mitigation.** This pillar steers APEC's efforts to better identify and understand existing hazards while encouraging the assessment of community exposure and vulnerability across the Asia-Pacific region. Reducing the loss of life, property, and lessening disaster impacts are key elements of this pillar.

Based on the identified hazards and resulting risk assessments, proactive structural and non-structural measures should be identified, evaluated, prioritized, funded, and undertaken to prevent and mitigate disaster impacts. Interventions may include the development of risk and hazard mapping, multi-hazard mitigation plans, prioritizing investments in resilient critical infrastructure, including social and cultural infrastructure, and more.

2. **Preparedness.** This pillar supports APEC's emergency preparedness activities across the Asia-Pacific. Initiatives under this pillar are multi-level, multi-sectoral, and multi-stakeholder. At the community level, this pillar encourages economies to undertake community-level outreach to strengthen a community's capacity to understand the risks they face, recognize the necessary actions needed to prepare for specific hazards, apply risk-informed decision-making when facing an emergency, and when necessary, cope, and recover from disaster impacts.

At the economy-wide level, this pillar references a wide array of efforts. For the purposes of this Framework, we highlight only a few of the many activities that contribute to disaster preparedness. These include:

- Enabling cooperation between governments and businesses to increase the resilience of businesses—through business continuity planning—supply chains and other economic sectors that may be impacted by disasters.
- Prioritizing science and technology in emergency preparedness, including but not limited to utilizing current and advanced Information and Communications Technologies for comprehensive disaster management.
- Creating training and education tools for the emergency management workforce to equip them with the knowledge to prepare their communities for the risks they face.
- Developing and promoting financial tools, such as microinsurance and catastrophic risk insurance, to help protect households, communities, and Micro, Small, Medium Enterprises (MSMEs) from the financial and economic losses that each disaster brings.

At the regional level, this pillar calls for greater regional cooperation to strengthen early warning mechanisms for transboundary hazards in the region, such as tsunamis and typhoons.

3. **Response.** This pillar focuses on engaging stakeholders of the affected economies in operational interventions immediately after a disaster. It involves the identification and assessment of impacts to the economy and marketplace following the disaster and the implementation of response programs, such as but not limited to the provision and replenishment of lost purchasing power to affected consumers, procurement of relief goods and services from business and people closest to the disaster area, and provision of immediate needs through market-based solutions so that economic recovery is stimulated while immediate relief is provided.

It also covers clearing of bottlenecks in supply chains to get emergency goods in and out of businesses back online.

4. **Resilient Recovery.** This pillar aims to enable disaster-affected communities to recover by ensuring minimal disruption in livelihood and other economic activities; fast-tracking the resilient recovery of affected economic activities after a disaster; fostering education continuity; rehabilitating affected ecosystems; and improving the overall living conditions of affected and at-risk communities and businesses.

- As part of APEC's recovery efforts, Resilient Recovery and Build Back Better are at the core of APEC's efforts to address the challenges of frequent and severe disasters. It entails a shift from simple recovery and restoration; to safer, more adaptive, resilient, and inclusive communities.
- Drawing from recent experiences, the immediate rehabilitation of MSMEs and businesses on the ground proved to be crucial in ensuring faster rehabilitation and moving forward after a disaster. This is where a responsive business continuity plan becomes most important. In this light as well, disaster risk financing plays a critical role because it can help provide streamlined access to financial resources at a time when MSMEs, businesses, and communities need them most.
- Immediate access to financing will empower affected communities and enable them to recover and build back better within a shorter duration.

## ANNEX C – SUPPORTING PRINCIPLES FOR AN ENABLING ENVIRONMENT FOR DISASTER RISK REDUCTION (DRR)

1. **Community Participation.** DRR interventions are most effective when the impacted communities and economic actors are actively engaged in each phase of DRR. They should be empowered by providing them with the necessary information to reduce the risk, prepare, cope, and recover from disasters and by actively involving them in planning and program design and implementation. Fostering action at the local level should also help ensure the inclusivity and sustainability of DRR.
2. **Disaster Risk Governance.** Disaster risk governance anchored in a whole-of-society and ecosystem-based approach provides the foundation for the effective implementation of a DRR framework. This approach entails streamlining and fostering collaboration and mutual reinforcement across mechanisms and institutions, not only domestically but in the whole Asia-Pacific community. It is important to encourage collaboration between public and private sectors in creating incentives and supporting policies and actions that encourage risk reduction.
3. **Disaster Risk Financing.** Strong financial systems and tools provide a stable backbone for a DRR framework. These systems should help community prevention, mitigation, preparedness, and recovery from disasters by providing access to resources that support community-level management of impacts on people, the economy, and ecological systems. Disaster risk financing, such as insurance, should incentivize DRR actions and policies.
4. **Science and Technology.** Science and technology offer innovative solutions for identifying disaster risk and effectively responding to emergency management.

Harnessing scientific and technological innovations through an enabling, science-based policy environment can lead to more timely, accurate, and responsive weather forecasts, hazard mapping, disaster mitigating and resilient technologies. Furthermore, science and technology inform economic investment by both the public and the private sector.

Applying science and technology approaches supports the development of solutions tailored to address changing climate patterns that affect agricultural production, health, critical infrastructure and more. Utilizing current and advanced Information and Communications Technologies for disaster management can enhance preparedness for natural and human-induced disasters.

5. **Critical Infrastructure Resiliency.** The resiliency of critical infrastructure is vital to ensuring the successful implementation of this DRR framework. Critical infrastructure includes water, energy, transportation, road networks, communication, public health, and financial services. Infrastructure resilience ensures the continuity of supply chains, business, and economy-wide operations.
6. **Nature-Based Solutions.** Preserving ecological integrity through conscious and sustainable environmental management and engineering practices that prioritize conservation, rehabilitation, and protection is expected to minimize the vulnerability and risks that APEC communities are exposed. Using natural features and processes to promote adaptation and disaster resilience can help reduce potential disruptions caused by disasters.

7. **Inclusiveness of Women and Vulnerable Sectors in DRR.** DRR should take a holistic, proactive, multi-stakeholder, whole-of-society based approach inclusive of the different concerns and perspectives of women, youth, the elderly, persons with disabilities (PWDs) and other sectors.

Addressing the needs of women and vulnerable groups in DRR is critical to ensuring community resilience. It is thus imperative that the vulnerabilities, needs, and capacities of women, youth, elderly, PWDs and other vulnerable sectors be assessed to address their specific needs. Platforms for their engagement in planning process, and policy and decision-making activities should also be established and sustained.

## **ANNEX D – AREAS FOR COLLABORATION**

### **1. Prevention and Mitigation**

- a. Utilization of science, technology and research to prevent and mitigate disaster impacts;
- b. Promotion of open access to non-sensitive risk and hazard mapping information, in an accessible and standardized format for households, communities, businesses, and governments to ensure making appropriate decisions;
  - Assessing community needs, cultural context and identifying trusted messengers with risk information is a recognized best practice.
- c. Identification of vulnerable and hazardous areas, taking mitigating steps to reduce disaster risks of affected communities.
- d. Conservation of ecosystems, e.g., wetlands, mangroves, dunes, forests, that can provide natural protection to reduce the vulnerability of and risks in APEC communities;
- e. Enhancement and harmonization of infrastructure standards to make them responsive to the increased frequency and impact of disasters; and
- f. Facilitation of the establishment of appropriate mechanisms and tools to finance investments in prevention, mitigation and risk transfer, in collaboration with the private sector, particularly the capital markets and insurance industry.

### **2. Preparedness**

- a. Voluntary sharing of non-sensitive information and best practices to improve early warning systems and development of comprehensive disaster risk management systems utilizing current and advanced science and technology tools as well as Information and Communications Technologies;
- b. Capacity-building and voluntary technology-transfer to sustain the development, improvement and exchange of important Disaster Risk Reduction (DRR) skills, knowledge, and technologies, as mutually agreed;
- c. Emphasis of government and business cooperation in a whole-of-society approach to preparedness;
- d. Development of financial and enterprise tools that are suitable to the DRR goals and objectives of APEC communities; and
- e. Building resilience of Micro Small Medium Enterprises, livelihoods and businesses against disasters through responsive business continuity plans and microinsurance, among others.
- f. Utilization of science, technology and research in preparedness activities.

### **3. Response**

- a. Establishment, engagement in and promotion of joint and/or collective emergency response policies taking into account recognized international and regional humanitarian response procedures, where appropriate, to reduce barriers to the movement of emergency responders and humanitarian relief across borders;
- b. Utilization of communication mechanisms to expedite the flow of goods after transportation disruptions in order to assist in trade recovery;
- c. Encouragement of appropriate donations after disasters in order to expedite the movement of goods and reduce chokepoints in the supply chain; and
- d. Promotion of market-based response mechanisms/approaches to address impacts to markets and economic systems.

### **4. Resilient Recovery**

- a. Mainstreaming of DRR and climate change adaptation into local and economy-level development planning;

- b. Promotion of local level action for long-term and sustained impact of DRR interventions;
- c. Promotion of coherence and mutual reinforcement among local, economy-level, regional, and global DRR policies and programs; and
- d. Development of science-based pre-disaster recovery plans.
- e. Ensure gender, age and disability-responsiveness of DRR policies, plans, and programs.