



Planning for Resilience

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countries and
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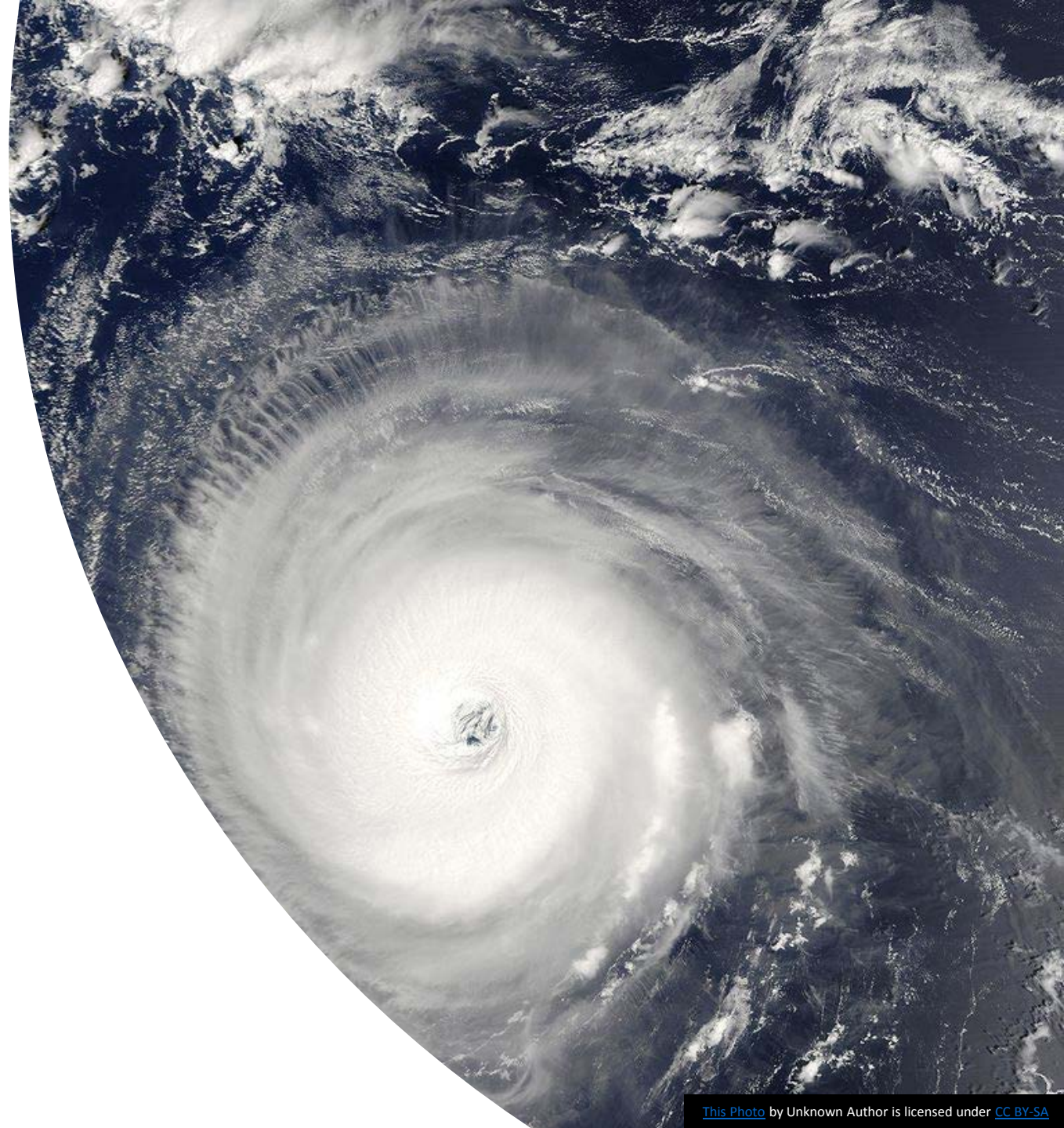
**Pillars of
Disaster Risk
Management**

Disaster vulnerability

Data from the World Risk Index, which evaluates countries' exposure and vulnerability to risks associated with natural phenomena, shows that **over 60 per cent** of the countries of Latin America and the Caribbean **present medium to very high risk** in the face of disasters.

Of these, **over half have high and very high risk levels**. The CARICOM states fall in to this group.

The effects of climate change in the region over recent years have led to natural phenomena becoming both more numerous and more intense.



Vulnerability exacerbated by Climate Change



- A 1.8mm annual increase in sea level has been observed in the Caribbean



- It is estimated that 70% of beaches will lose 0.25-9M of shoreline a year



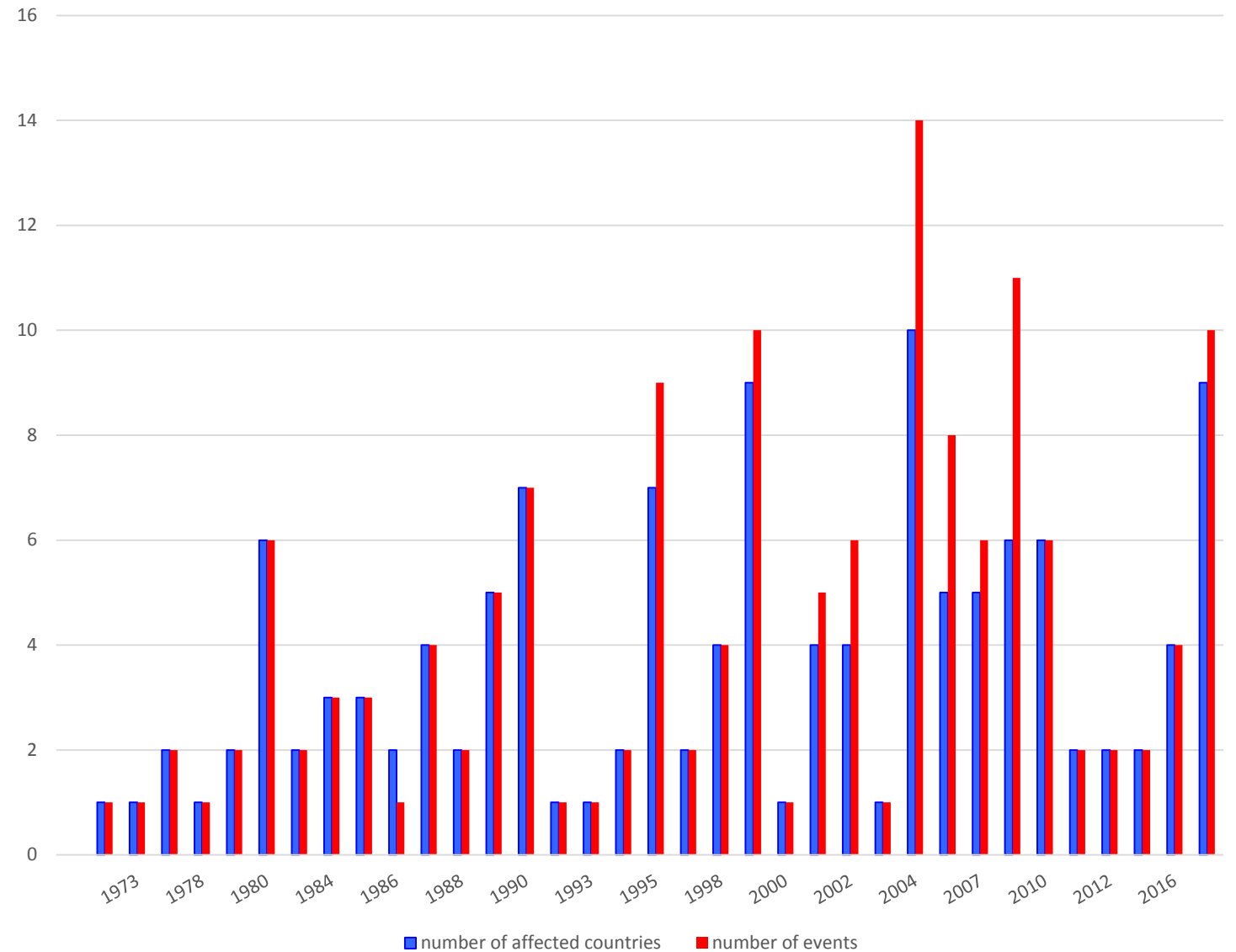
- This will damage infrastructure and housing, with the majority of population in coastal areas



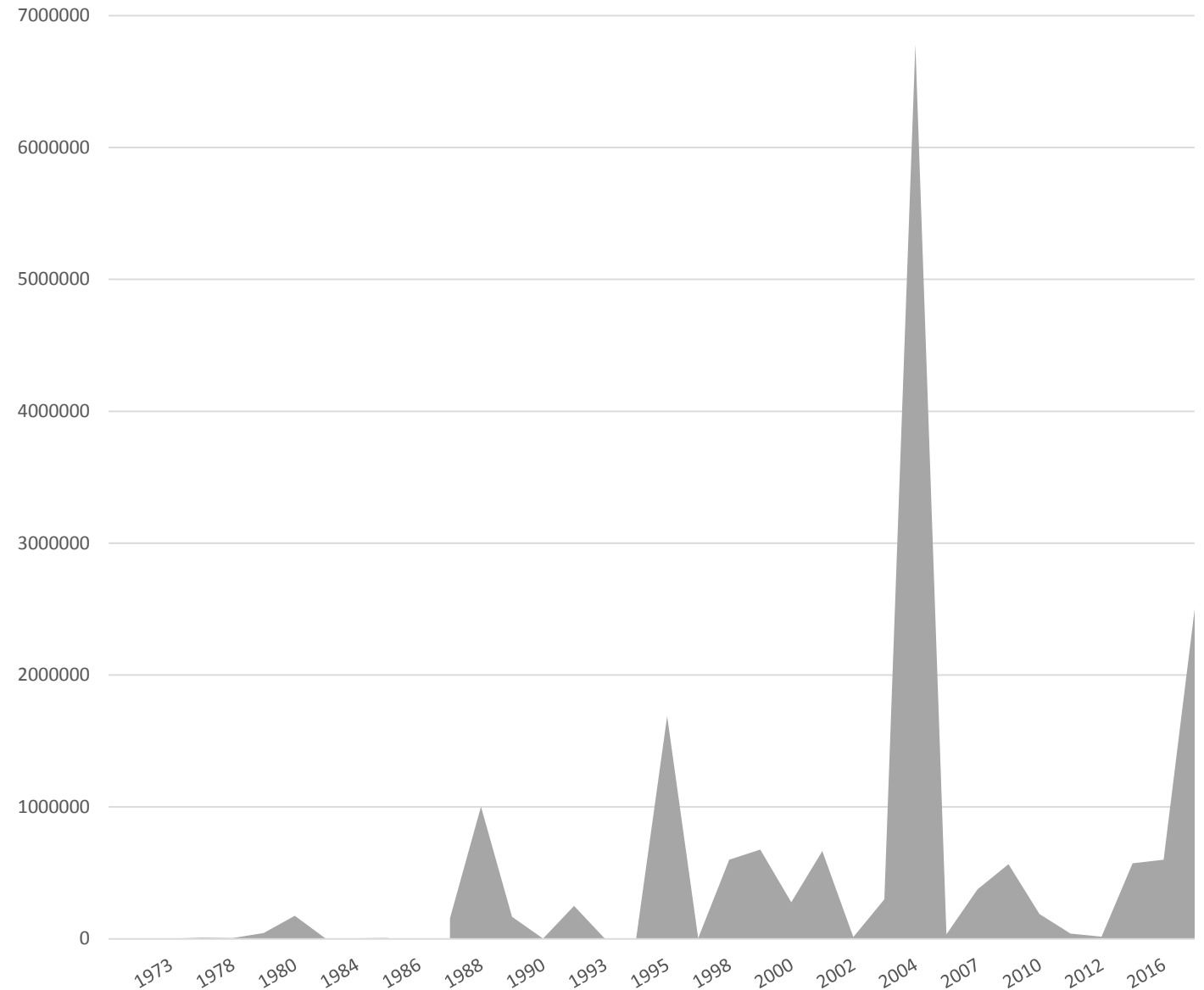
- Coastline losses have a greater impact on the economy as a result of loss of tourism receipts



Number of events and number of affected countries in the English-speaking Caribbean



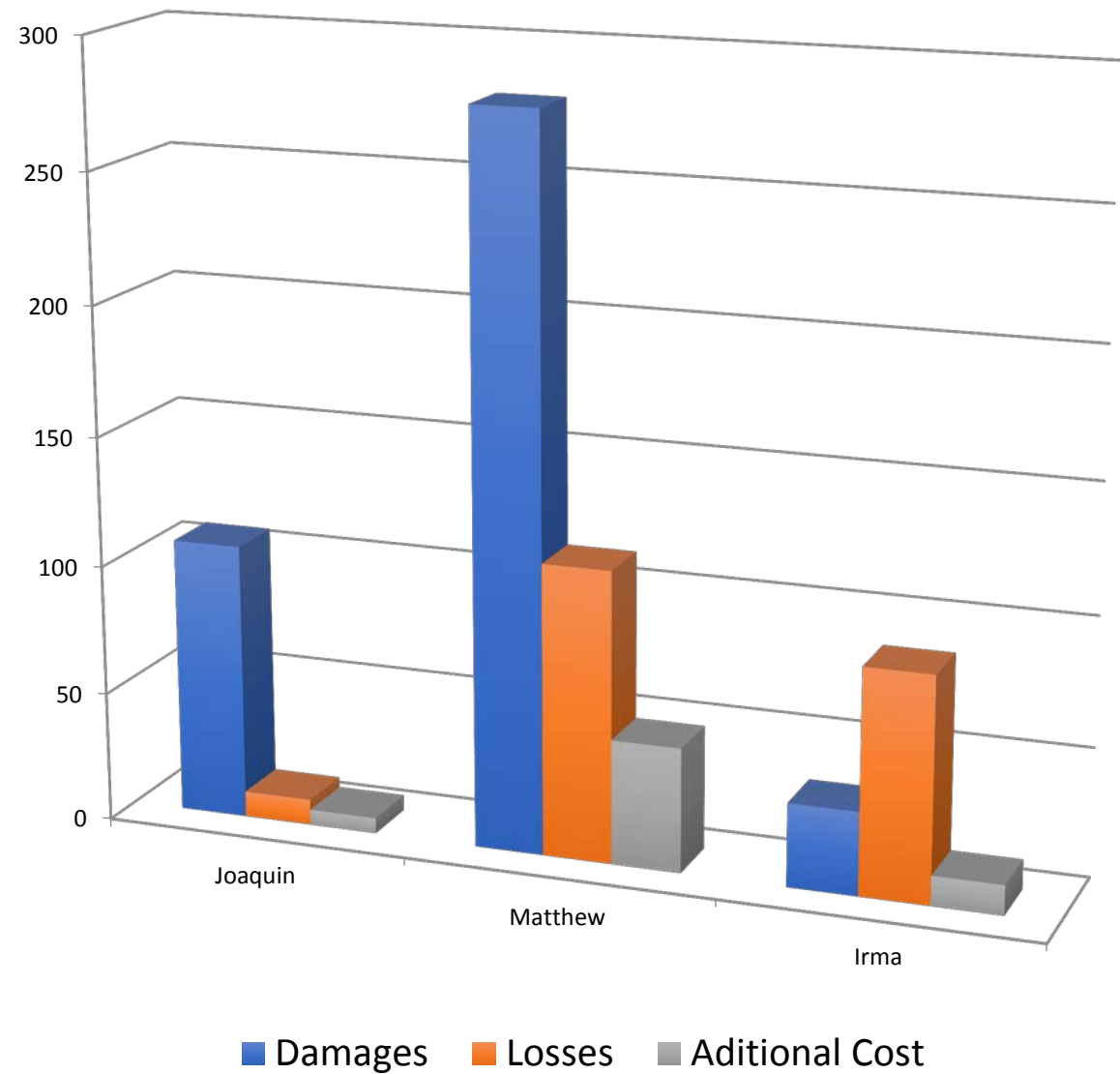
Damage related to storms in the English- speaking Caribbean (2017 '000 US\$)



Tropical Storms and Hurricanes in The Bahamas (1990-2017)

Year	Event	Year	Event
1990	Hurricane Klaus	2005	Hurricane Katrina
			Hurricane Rita
			Hurricane Wilma
1991	Tropical storm Fabian	2007	Hurricane Noel
1992	Hurricane Andrew	2008	Hurricane Hanna
			Hurricane Ike
			Tropical storm Fay
1995	Hurricane Erin	2011	Hurricane Irene
1996	Hurricane Bertha	2012	Hurricane Sandy
	Hurricane Lili		
1998	Hurricane Georges	2014	Hurricane Arthur
	Hurricane Inez		
1999	Hurricane Dennis	2015	Hurricane Joaquin
	Hurricane Floyd		Hurricane Kate
	Tropical storm Harvey		
	Tropical storm Irene		
2001	Hurricane Michelle	2016	Tropical storm Bonnie
			Hurricane Hermine
			Hurricane Matthew
2004	Hurricane Frances	2017	Hurricane Irma
	Hurricane Jeanne		Hurricane Maria
			Hurricane Jose

Effects of 2015-2017 Hurricanes in the Bahamas (millions US\$ 2017)



Planning as an implementation measure for achieving the SDGs

United Nations General Assembly Resolution 70/1, named “Transforming our world: the 2030 Agenda for Sustainable Development”, devotes special attention to the role of planning and the process whereby this commitment is to be adapted to the national context:

- “Targets are defined as aspirational and global, with each Government setting its own national targets guided by the global level of ambition but taking into account national circumstances. Each Government will also decide how these aspirational and global targets should be incorporated into national planning processes, policies and strategies” (para. 55).
- “We encourage all Member States to develop as soon as practicable ambitious national responses to the overall implementation of this Agenda. These can support the transition to the Sustainable Development Goals and build on existing planning instruments, such as national development and sustainable development strategies, as appropriate” (para. 78).

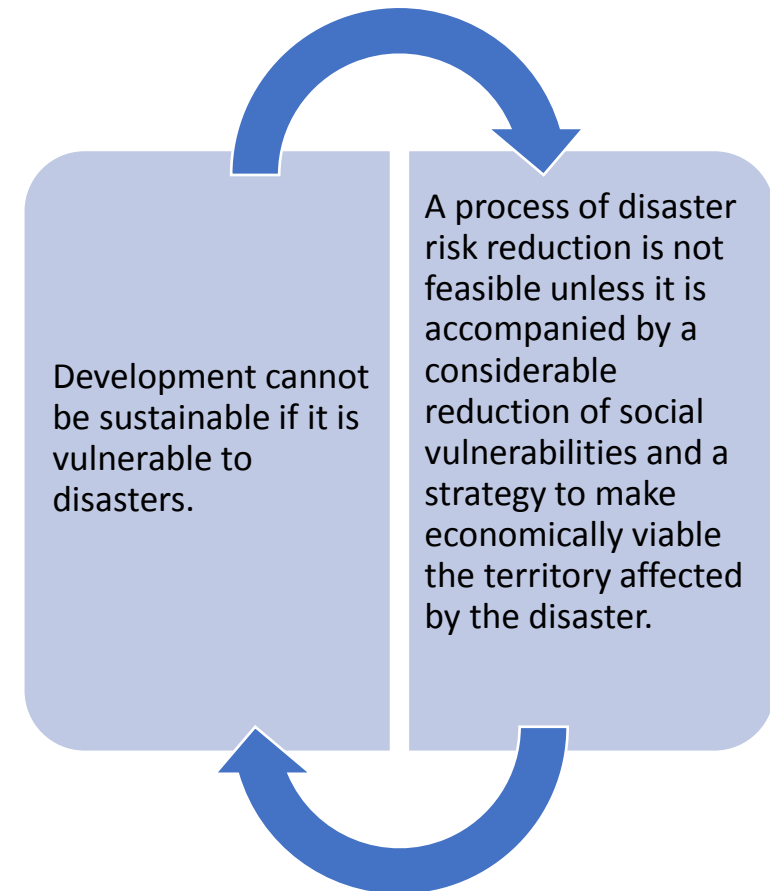
SUSTAINABLE DEVELOPMENT GOALS



Planning for resilience

Disaster risk reduction (DRR) is “the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.”

Planning for sustainable development and disaster risk reduction are closely related concepts:

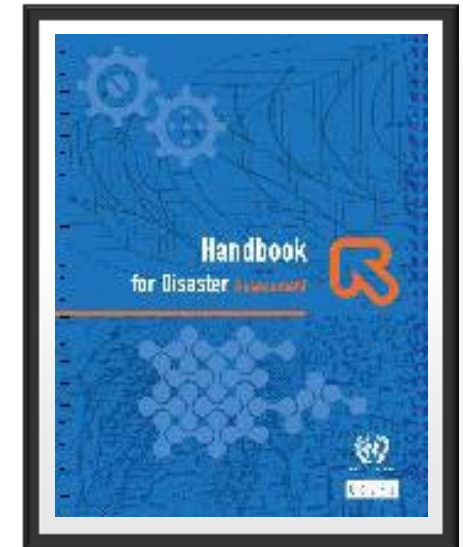


Planning for resilience

After hurricanes Mitch and Georges (1998) affected Central American and Caribbean countries, a broad consensus was generated that **disaster risk reduction should be considered as an investment and a comprehensive strategy in development processes and instruments.**

The results of ECLAC's assessments of the effects and the socioeconomic and environmental impacts of disasters contributed decisively to this outcome. ECLAC also contributed to the understanding of the impact of disasters by developing and updating a methodology for disaster assessment.

Given the vulnerabilities of Latin American and Caribbean countries, a Disaster Risk Management (DRM) strategy should be included in national development instruments.



Pillars of action of disaster risk management

Considering the complex dynamics of disaster risk management, the conceptual framework developed by the Global Facility for Disaster Reduction and Recovery (GFDRR) of the World Bank and adopted by the Sendai Framework for Disaster Risk Reduction 2015-2030 is used to organize a resilient reconstruction.

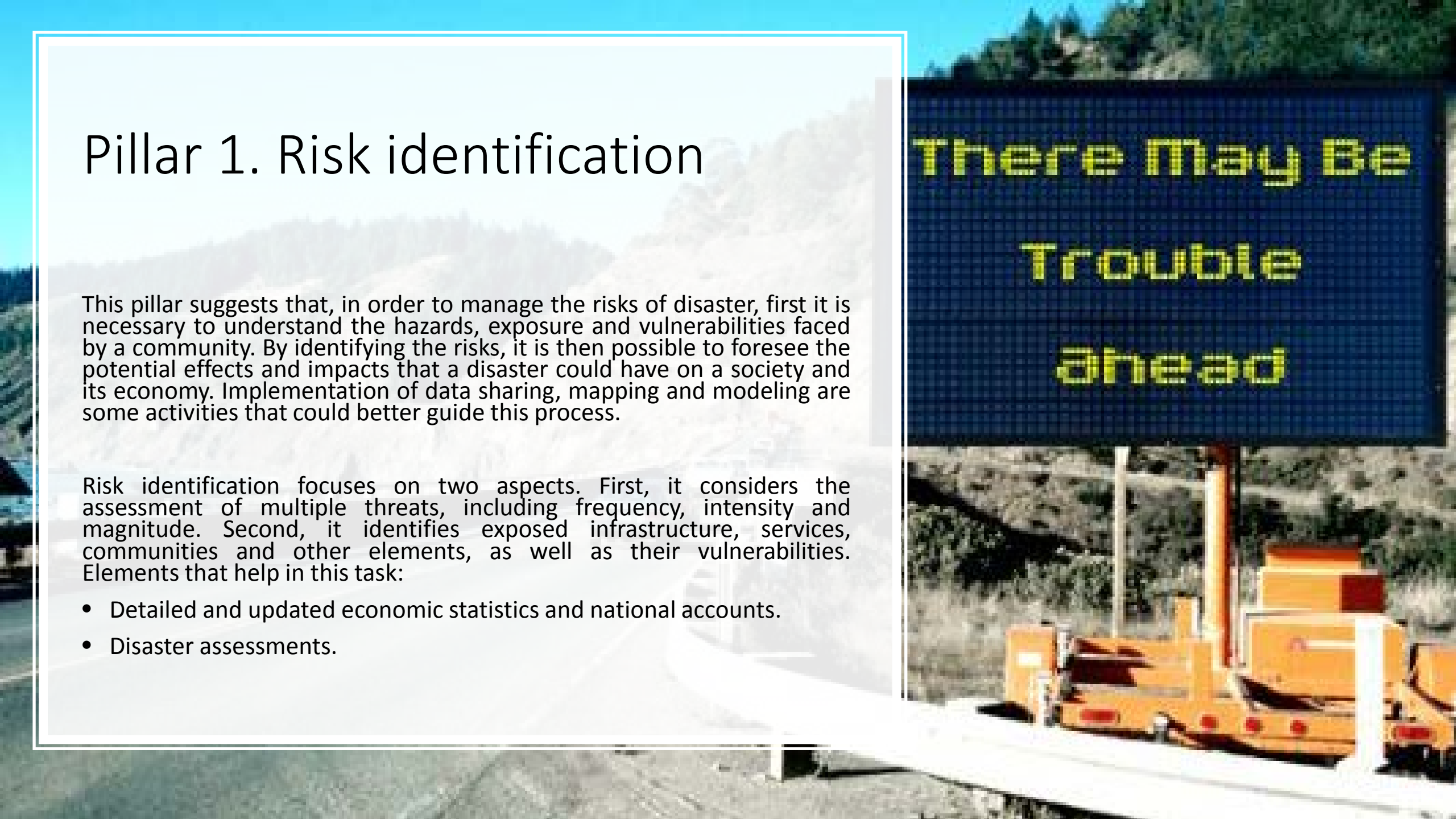
Pillar 1	Risk identification	Improved identification and understanding of disaster risks through building capacity for assessments and analysis
Pillar 2	Risk reduction	Avoided creation of new risks and reduced risks in society through greater disaster risk consideration in policy and investment
Pillar 3	Preparedness	Improved capacity to manage crises through developing forecasting and disaster management capacities
Pillar 4	Financial protection	Increased financial resilience of governments, private sector and households through financial protection strategies
Pillar 5	Resilient recovery	Quicker, more resilient recovery through support for reconstruction planning

Pillar 1. Risk identification

This pillar suggests that, in order to manage the risks of disaster, first it is necessary to understand the hazards, exposure and vulnerabilities faced by a community. By identifying the risks, it is then possible to foresee the potential effects and impacts that a disaster could have on a society and its economy. Implementation of data sharing, mapping and modeling are some activities that could better guide this process.

Risk identification focuses on two aspects. First, it considers the assessment of multiple threats, including frequency, intensity and magnitude. Second, it identifies exposed infrastructure, services, communities and other elements, as well as their vulnerabilities. Elements that help in this task:

- Detailed and updated economic statistics and national accounts.
- Disaster assessments.



There May Be
Trouble
ahead

Pillar 2. Risk reduction

In this pillar, instruments such as policies and investment programmes are critical to reducing existing risks and preventing new ones from arising.

Depending on the type of risk, it could be reduced, or at least reduce the exposure of a community or asset to a particular threat. Therefore, structural and non-structural prevention and mitigation measures are core components of this pillar.

Recommendations are a combination of policies and particular technical solutions. These measures should be accompanied with a comprehensive development plan, as their not isolated implementation would not greatly improve resilience in the islands.

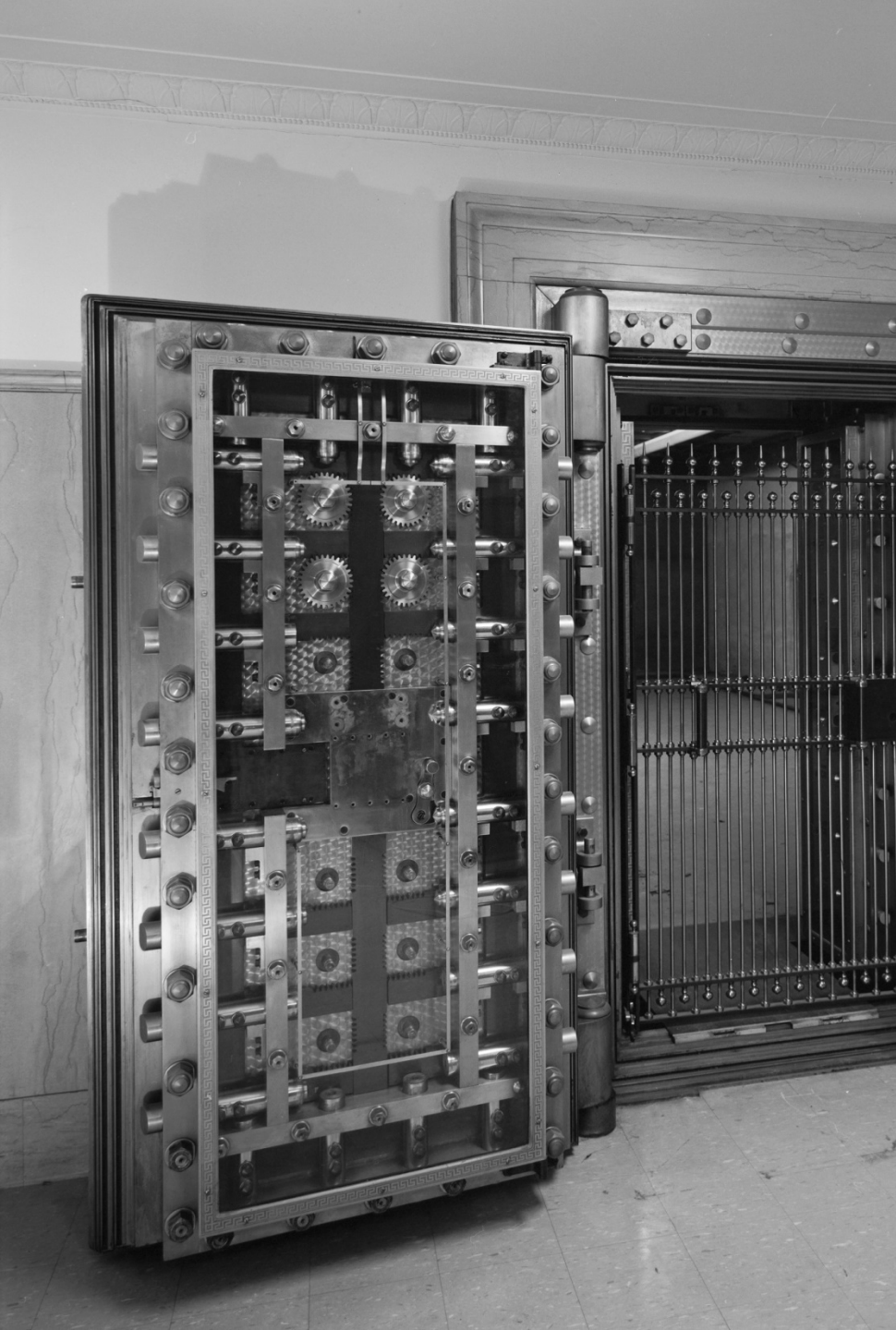


Pillar 3. Preparedness

Preparedness refers to the knowledge and capacities developed by governments, businesses and communities to anticipate, respond to, and recover from the effects of a natural hazard or disaster. This pillar should contribute to an organized transition from response to recovery.

The degree and quality of preparedness will be closely linked to a sound analysis of risks and to existing warning systems.





Pillar 4. Financial protection

This pillar attempts to create strategies to protect governments, businesses and households from the economic impact of a disaster. Considering that risks cannot be eliminated, it is therefore important that countries protect their fiscal balance from shocks while they are still able to respond to the emergency.

Financial protection refers to insurance at the sovereign and household levels, but also in terms of social protection for vulnerable populations.



Pillar 4. Financial protection

Strengthening macroeconomic capabilities requires two measures:

- Generate the fiscal or borrowing capacity that allows countries to make *ex-ante* investments to reduce disaster risks, as well as to prepare for a timely and effective response;
- Develop financial protection strategies that consider instruments of risk transfer, which would alleviate the burden of the State in the processes of response and recovery.

Financial instruments could include:



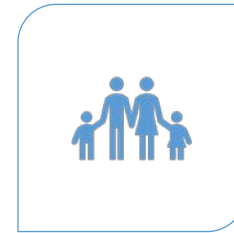
CATASTROPHES' RISK
INSURANCE



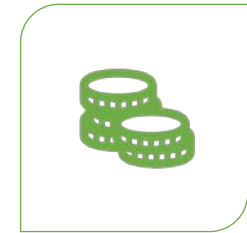
A GOVERNMENT INITIATED
RECOVERY FUND TO PROVIDE
LIQUIDITY TO FACILITATE
RECOVERY AFTER A DISASTER



INCENTIVES TO PRIVATE
INSURANCE



A MICRO-CREDIT SCHEME FOR
MICRO, SMALL AND MEDIUM
ENTERPRISES AND POORER
HOUSEHOLDS



A RESILIENCE FUND FOR
LONGER-TERM
RECONSTRUCTION AND
ECONOMIC ADJUSTMENT,
INCLUDING ECONOMIC
DIVERSIFICATION IN THOSE
COUNTRIES WHERE ACTIVITY
IS LARGELY DEPENDENT ON
ONE SECTOR



Pillar 5. Resilient recovery

- If a disaster cannot be prevented, then recovery and reconstruction can be used to improve resilience in the affected areas.
- Even if disasters have harmful effects on societies and economies, they are also an opportunity to change policies and practices that do not incorporate disaster risk management. It is important to plan a multi-risk reconstruction process that can respond not only to the hazard that caused the disaster, but to any hazard to which the country or community is exposed.



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