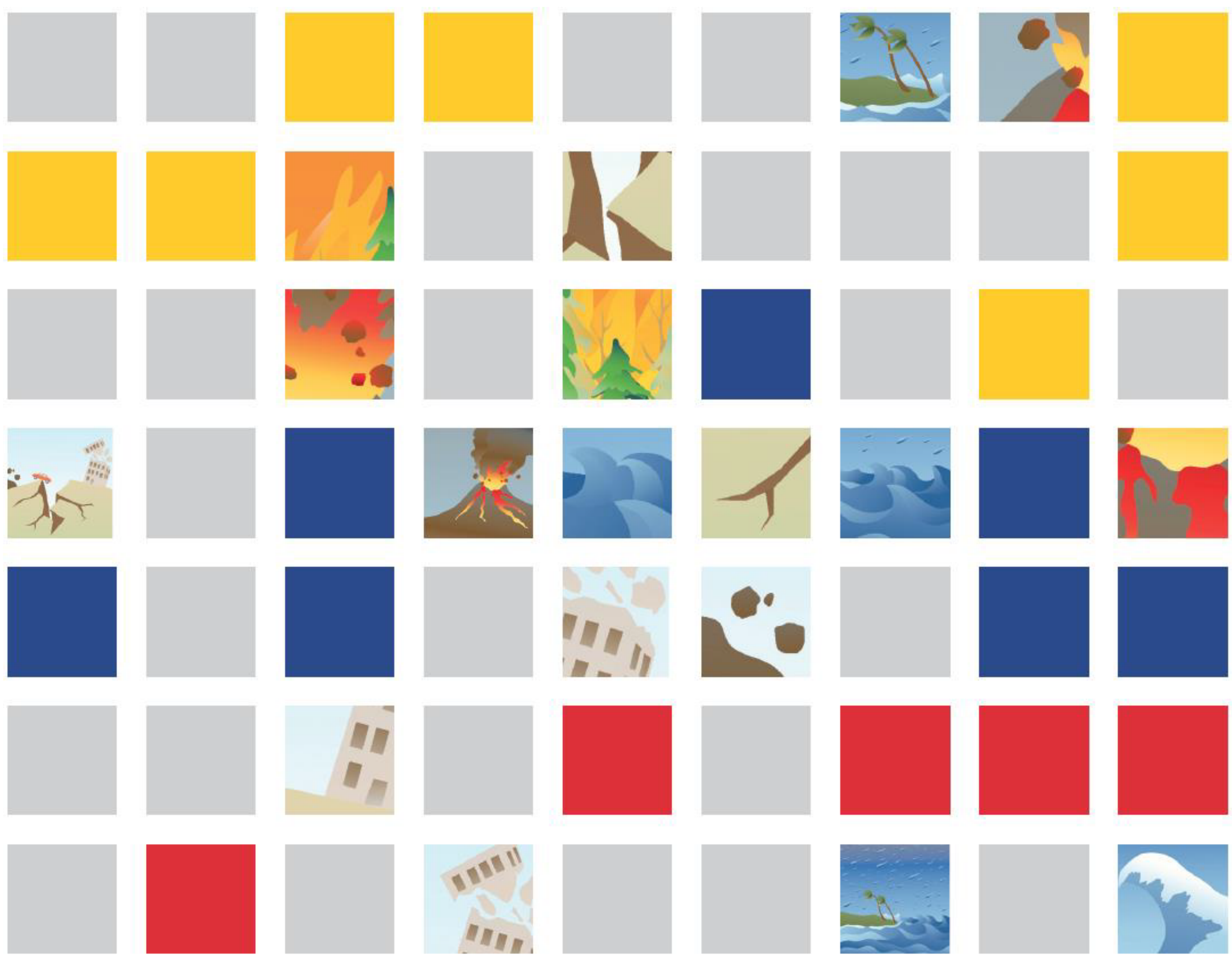
Colombia: Policy strategy for public financial management of natural disaster risk



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GFDRR
Global Facility for Disaster Reduction and Recovery

Acronyms

ANI	National Infrastructure Agency
Cat DDO	Development Policy Loan with Catastrophe Deferred Drawdown Option
CCE	National Procurement Agency
CEPAL	The United Nations Economic Commissions for Latin American and the Caribbean
CONPES	National Council for Economic and Social Policy
DNP	National Planning Department
FNGRD	National Fund for Disaster Risk Management
GoC	Government of Colombia
IADB	Inter-American Development Bank
MHCP	Ministry of Finance and Public Credit
PND	National Development Plan
PPP	Public-Private Partnership
SECO	Swiss State Secretariat for Economic Affairs
SGC	Colombian Geological Service
UNGRD	National Disaster Risk Management Unit

Introduction

Disasters resulting from natural hazards represent an important challenge for Colombia's fiscal sustainability and stability. Colombia is one of the countries with the highest recurrence rate of disasters caused by natural hazards in Latin America (see the Annex)[1]. As the country's population and economy continue to grow, so will the economic losses resulting from such events – an average of 600 disaster events of which is reported per year[2]. Colombia's rate of economic growth is increasing the base of assets exposed to disaster risks, which may lead to significant increases in losses, particularly if investments in new assets are not accompanied by plans for mitigating disaster risk[3].

The Government of Colombia (GoC) recognizes the importance of mitigating these events and has taken several steps to mainstream disaster risk management into its policy and programs, as evinced by the National Development Plan "2014-2018", "All for a New Country". The MHCP is committed to developing strategies for reducing its contingent liabilities in relation to disasters and to managing the fiscal risk resulting from these events.

This document presents the priority policy objectives that have been established to assess, reduce, and manage fiscal risk due to natural disasters. It also describes the MHCP's efforts to progress its policy objectives in the long term. These policy objectives represent the MHCP's ex ante policy framework regarding management of financial and fiscal disaster risk.

The MHCP identifies three priority policy objectives in order to strengthen management of the Government's contingent liabilities and thus support the goal of achieving macroeconomic stability and fiscal balance. The policy objectives are: (i) Identification and understanding of fiscal risk due to disasters; (ii) financial management of natural disaster risk, including the implementation of innovative financial instruments; and (iii) catastrophe risk insurance for public assets.

Supported by various international organizations, the MHCP works with different public entities, such as the National Procurement Agency - Colombia Compra Eficiente (CCE), the National Planning Department (DNP), the National Disaster Risk Management Unit (UNGRD), the National Infrastructure Agency (ANI), and the Colombian Geological Service (SGC), among others, to implement these policy objectives. The MHCP has a strong ongoing partnership on financial management of disaster risks with the World Bank's Disaster Risk Financing and Insurance Program (DRFIP), supported by the Swiss State Secretariat of Economic Affairs (SECO) and the Global Facility for Disaster Reduction and Recovery (GFDRR). These policy objectives were developed with the active support and advice from a team of multidisciplinary experts who have helped to foster major advances in their design and implementation.

1. The annex includes detailed information on the impact of natural disasters on Colombia.
2. Independent Evaluation Group-World Bank. Natural Hazards, Risks to Development: An Evaluation of World Bank Assistance for Natural Disaster Events (Washington, DC). 2006.
3. World Bank (2012). Campos A.; Holm-Nielsen N.; Díaz C.; Rubiano D.; Costa C.; Ramírez F.; Dickson E. (Coordinators and Editors). Analysis of Disaster Risk Management in Colombia: A Contribution to the Creation of Public Policies. Bogota, Colombia: World Bank – GFDRR, 2012.

Legal mandate for financial management of natural disaster risks in Colombia

The Government of Colombia (GoC) is designing a financial strategy for covering contingent liabilities generated by disasters caused by natural hazards. This initiative falls within the government's regulatory and institutional framework for managing explicit contingent liabilities generated through public credit operations, legal actions, and administrative contracts (including public-private partnerships). The origin of this comprehensive approach to fiscal risk assessment and management can be found in Law 448 of 1998, which requires entities to include resources in their budgets for covering contingent liabilities. Law 819 of 2003, which establishes requirements for the development of a Medium-Term Fiscal Framework, stipulates that the valuation of explicit contingent liabilities must be included in this Framework. In addition, the identification and assessment of fiscal risk sources, including implicit and explicit contingent liabilities, are in line with recommendations in the International Monetary Fund's Code of Good Practices in Fiscal Transparency (2007).

Within this context, the Ministry of Finance and Public Credit (*Ministerio de Hacienda y Crédito Público*—MHCP) promotes the government's efforts in assessing, reducing, and managing fiscal risk associated with natural disasters.

Policy Objectives

This document describes the three priority policy objectives established by MHCP for assessing, reducing, and managing the fiscal risk resulting from natural disasters. It aims to strengthen the management of its contingent liabilities and to support macroeconomic stability and fiscal balance. The MHCP has identified these policy objectives in order to present the prioritized actions for reducing fiscal vulnerability to disasters. These areas have been established based on the role of financial management of natural disaster risks in three important agendas in Colombia: first, as a component of the fiscal management strategy headed by the MHCP; second, within the government's approach to disaster risk management, which includes financial management of natural disaster risks as a component of the National Law on Disaster Risk Management of April 2012 (Law 1523); and finally, as part of the MHCP's efforts to manage public debt sustainability and transparency.

The mentioned priorities are reflected in the National Development Plan 2014–2018, entitled "All For a New Country (PND)" (Act 1753 of 2015), under which Article 220 of the previous PND, entitled "Prosperity for All" (Law 1450 of 2011), remains in effect. MHCP will support the management of fiscal risk related to natural disasters, within the broader context of macroeconomic stability and fiscal balance. Article 220 of Act 1450 of 2011 (in force by express provision of Article 267 of the current PND) states that the MHCP will design a strategy for reducing the State's fiscal vulnerability to natural disasters.

The MHCP has identified three priority policy areas for assessing, reducing, and managing fiscal risk arising from natural disasters:

I. Identification and understanding of fiscal risk due to natural disasters;
II. Financial management of disaster risk, including the implementation of innovative financial instruments; and
III. Catastrophe risk insurance for public assets.

Through the advancement of parallel activities in these three areas, the GoC will improve its financial response capacity in the case of a disaster and will mitigate the long-term fiscal impacts from such an event.

It is important to note that financial management of disaster risk requires long-term commitment. The MHCP has made progress in this area for several years and is committed to further strengthening its approach.

Policy objective 1.

Identification and understanding of fiscal risk due to natural disasters

The identification and understanding of fiscal risk due to natural disasters is the first step in managing natural disaster risks. Using probabilistic catastrophe risk model developed for Colombia[4], the MHCP has assessed that a 1-in-250 year earthquake event would cause fiscal losses related to its contingent liabilities estimated at approximately 1.4% of the GDP[5] (Table 1).

Table 1. Estimated contingent liabilities

Contingent Liabilities	% of GDP
Legal actions	14.04
Infrastructure projects	0.26
Public Credit operations	0.22
Natural Disasters*	
Fiscal portfolio	1.40

Source: MHCP (2011).
*Contingent liability related to natural disasters is calculated from the 1-in-250 year probable maximum loss (PML) for earthquake for public assets, US$4.417 billion, as estimated in UNISDR (2011).

Although the GoC has made progress in the assessment of its contingent liability related to natural disasters, further analysis is required to refine this assessment. The GoC has only partial information, and the available information is scattered throughout various government entities. In order to improve the understanding of the fiscal risk generated by disasters, the MHCP will prioritize the following activities:

- **Improve information on the exposure of public buildings and infrastructure to natural disasters, as well as historical information on disaster losses to the public sector.** In particular, the MHCP seeks to better understand the potential losses in the case of disasters, to inform decision-making on investment in disaster risk mitigation and in new assets, and to improve insurance coverage for its portfolio of assets. In this context, the MHCP developed databases of physical characteristics of public assets and of insurance policies for public assets. In alignment with the National System for Disaster Risk Management (Law 1523 of 2012), an entity will be established to maintain the databases.

In addition, the MHCP improves its understanding of its fiscal risk profile by collecting further information on the government's historical losses from disasters. In particular, it improves its understanding of risks generated by less severe but recurrent events that accumulate over time. These efforts are being coordinated with the entities with relevant respective responsibilities.

- **Use and promote the use of financial and actuarial decision making tools.** These tools help the MHCP assess its financial response capacity post-disaster and to improve decision-making on its disaster risk financing. They go beyond assessment of physical damages to buildings and determination

4. Probabilistic catastrophe risk models assess the expected losses and probable maximum losses of disaster risks using information on hazard, exposure, and vulnerability.
5. *Contingent Liability Management in Colombia and the Financial Strategy Associated with Natural Disasters*, Government of Colombia, in Improving the Assessment of Disaster Risks to Strengthen Financial Resilience (World Bank, 2012).

of replacement costs estimated by catastrophe risk models to provide financial information that enables the MHCP to design an optimal combination of financial instruments through cost-benefit and dynamic financial analysis.

- **Evaluate and adopt tools to assess possible increases in natural disaster risk generated by new public works and public-private partnerships (PPP).** The GoC has already initiated this effort, and the MHCP has started to collaborate with other national entities (e.g., ANI) on this activity, as reflected in recent regulations. Law 1508 of 2012, for example, requires the analysis of hazards and vulnerability in relation to each infrastructure project and all the sectoral projects that may be exposed to the risk of disasters, and CONPES 3714 of 2011 requires the inclusion of disaster risk analysis in public procurement processes.

The MHCP applies risk assessment tools to evaluate the contributions of proposed new investments to fiscal risk, including those made through PPP. One important aspect of this work is the MHCP's improvement of insurance requirements for concessionaires. The MHCP and ANI, with technical support from the World Bank, have jointly established standard terms and conditions and minimum requirements that meet international insurance market practice.

Policy objective 2.

Financial management of natural disasters

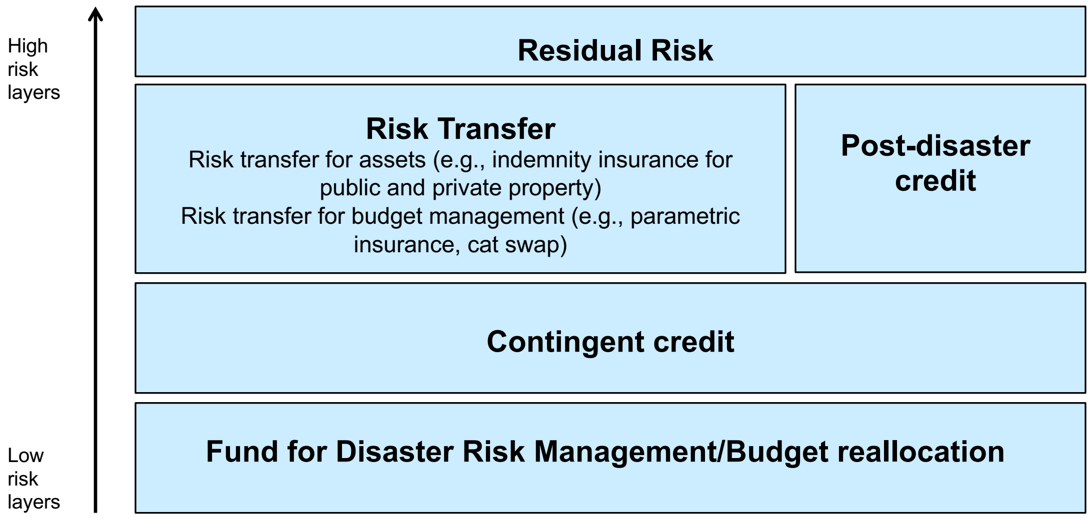
Natural disasters can generate fiscal volatility as a result of the sudden, unexpected expenditures required during and after a disaster. In the aftermath of a disaster, the government requires timely access to financial resources in order to finance an effective emergency response.

The MHCP initiated of the design of its financial management strategy for disaster risks in 2004. The National Council for Economic and Social Policy's (CONPES) document 3305 of 2004 allowed the GoC to access financial resources for a project designed to reduce fiscal vulnerability associated with natural disasters. A US$260 World Bank project included the development of a financial strategy for reducing fiscal vulnerability and a US$150 million pre-approved line of credit in the case of a disaster. In 2008 the GoC signed its first Development Policy Loan with Catastrophe Deferred Drawdown Option (Cat DDO),[6] for US$150 million—the first World Bank product designed specifically to provide contingent financing for natural disasters. The GoC fully drew down this Cat DDO in 2010 due to flooding throughout the country during the La Niña phenomenon. In 2012, the GoC signed a new US$250 million Cat DDO, which was renovated in 2016.

In 2012 and 2013, the MHCP has made significant progress in designing a comprehensive strategy for the financial management of disasters. The MHCP strategy considers ex-ante and ex-post instruments, such as a contingent credit line and insurance, in order to complement ex-post financial resources that will be accessed after a disaster. The MHCP promotes a multi risk layering strategy for financial management of disaster risk, based on the assessment of its contingent liabilities, as illustrated in **Figure 1**. Less severe but more recurrent losses are retained through reserves and contingent credit, while losses that exceed the retention capacity of GoC are transferred through market-based financial instruments. Finally, post-disaster credit is used to finance long-term reconstruction.

6. Following a declaration of a national disaster, the GoC can immediately withdraw funds from the Cat DDO.

Figure 1: Multi-layer financial strategy for disasters resulting from natural hazards



Source: Adapted from the *Financial Strategy for diminishing the State's fiscal vulnerability to natural disasters* (MHCP-DGCPTN) and from the World Bank Disaster Risk Financing and Insurance Program (2012).

The MHCP is enhancing its use of and designing additional financial protection instruments in order to establish a solid, robust strategy for financial management of disaster risks. The financial management strategy is being built on the foundations of the National Fund for Disaster Risk Management (FNGRD), created by Law 1523 of 2012, and on the Cat DDO. Historically, the MHCP has retained losses from natural disasters. The MHCP recognizes, however, that there are benefits from using risk transfer instruments for high risk layers. Thus, the MHCP is analyzing market-based catastrophe risk transfer instruments offered by the reinsurance and capital markets to complement its risk retention instruments.

In particular, the MHCP is implementing and/or evaluating the following instruments:

- **National Fund for Disaster Risk Management:** The GoC will determine its level of risk retention through the FNGRD. The budget allocations to the FNGRD will be the first source of financial resources to be used in the case of a disaster. The FNGRD must first be operationalized and strengthened. When the FNGRD resources are exhausted, and additional budgetary resources are not available or a more severe disaster occurs, the government will access its second layer of risk retention, contingent credit.

- **Contingent credit:** In light of the benefits the Government realized from access to its first Cat DDO during the 2010 La Niña phenomenon, the MHCP secured a second Cat DDO for US$250 million in 2012. In the case of a severe natural disaster triggering a national disaster, the MHCP can immediately drawn down part or all of the Cat DDO to fund emergency relief and recovery efforts. Beyond the benefit of immediate access to liquidity, a notable benefit of the Cat DDO is that it is currently offered at a lower interest rate than conventional loans.

- **Evaluation of financial protection instruments:** Currently, MHCP is evaluating different instruments offered by the capital market and the insurance market, such as catastrophic derivatives, catastrophe bonds, and weather derivatives. Technical advice for the evaluation, including the design of financial analytical tools to support the decision-making process, is being provided by the Disaster Risk Financing and Insurance Program of the World Bank and SECO. These instruments aim to improve the government's disaster response capacity in case of infrequent but potentially devastating and costly natural disasters. The MHCP is analyzing these instruments comprehensively in terms of their coverage, costs, and legal dimensions. If an instrument can improve the MHCP's financial management strategy for disaster risks in terms of (i) cost-efficiency, (ii) access to liquidity, and (iii) reduction of post-disaster fiscal pressure, the MHCP will integrate the instrument into its comprehensive strategy.

Policy objective 3.

Catastrophe risk insurance for public assets

In the longer term, the MHCP aims to reduce the government's contingent liabilities related to natural disasters through a combination of risk mitigation investments and catastrophe insurance for public assets, taking into account the best insurance practices at international level. The insurance of public assets is compulsory, and its omission is liable to disciplinary action and fiscal responsibility in accordance with the provisions of Colombian law. The relevant laws are (i) Act 42 of 1993, regarding the organization of the financial fiscal control system, which stipulates that public officers and individuals in charge of managing funds or assets of the state are obliged to protect the public assets and funds through insurance policies or special funds created for this purpose under penalty of the imposition of fines; according to the provisions of Act 1474 of 2011 (on mechanisms for the prevention, investigation and punishment of corruption and effectiveness of public management control), fines are imposed where behavior is attributable to criminal intent or gross negligence; and (ii) Act 734 of 2002, the disciplinary code, which subjects the failure to "ensure assets by their real value" and failure to "make the appropriate [insurance-related] budgetary appropriations" to sanctions—either dismissal or disqualification from holding public officer. However, an analysis conducted in 2012 on the insurance policies for buildings of the central government found that the insurance coverage could be improved. For example, each infrastructure was found to be individually insured, so that the benefits of diversification associated with pooling risks of all buildings in a single portfolio, such as lower costs, were not available. Consequently, the priority policy in this area is to strengthen the insurance of public assets.

In coordination with, and with the support of, other public entities, MHCP will develop policies or guidelines to improve the quality of catastrophe insurance of public assets. The strategy aims to improve the coverage and price of catastrophe insurance for public assets and road infrastructure (particularly priority transportation infrastructure, one of the sectors that have been most severely affected by disasters). The risk of fire and allied lines (including earthquake, among others) will be considered initially.

The GoC will consider various ways to improve the insurance strategy for public assets:

- **Information system on public buildings:** In keeping with their responsibility, several public entities are gathering additional information on the GoC's portfolio of assets as well as insurance policies in force. More detailed information on public assets will allow the private insurance industry to offer better coverage and prices, based on improved quantification of risk.

- **Standardized approach through demand aggregation tools for hiring insurance for public buildings:** By allowing the government to pool its assets and create a portfolio with a greater critical mass, this approach will offer risk diversification benefits and greater bargaining power. The National Public Procurement Agency (CCE), the agency recently created by the GoC to increase efficiency in public procurement, will participate in the process. MHCP and CCE will work together to define and analyze the technical, legal, and financial requirements of implementing a standardized approach using insurance demand aggregation tools for the insurance of public buildings. Additionally, they will also propose guidelines for strengthening the insurance of public buildings held by entities different from those at the central level.

- **Improvement of insurance of road infrastructure through a PPP scheme:** As discussed under Policy Objective 1, the MHCP and ANI have developed enhanced insurance requirements for PPP. With technical support from the World Bank, the government has developed technical guidelines for infrastructure insurance based on international market standards. These guidelines have been used to develop the technical requirements for concessionaires for the latest generation of infrastructure investment and are currently being implemented and improved.

- **"Best practices" insurance guidelines for decentralized public entities:** With the experience obtained in the process of improving the insurance strategy for public assets, guidelines to strengthen the insurance of buildings and other assets will be developed for territorial-level entities, the other branches of the public sector, attached and linked control bodies, and entities with special legal or constitutional status. With the support of the CCE, the DNP, and the UNGRD, training will be held for institutions at these levels; the purpose is to provide general recommendations to encourage and promote financial protection against disaster risks, taking into account standard terms and conditions for underwriting insurance policies.

Conclusion

Each year, natural disasters adversely impact the Colombian people and economy; in addition, the country is exposed to the risk of rare but severe natural events, such as earthquakes, that could affect the State's fiscal balance. For these reasons, it is essential that the MCHP devise a financial protection strategy for natural disasters, with the objective to reduce the State's fiscal vulnerability to these events and to improve its post-disaster financial response capacity.

The MHCP has identified three priority policy objectives for public financial management of disaster risk. These policy objectives are reflected in this document, which describes those areas that have been identified as essential for assessing, reducing, and managing the fiscal risk related to natural disasters.

The MHCP's primary goal is to improve the capacity of the Government of Colombia to effectively manage natural disasters and their associated fiscal risks. The MHCP is currently working on three priority policy objectives to achieve this goal: (i) Identification and understanding of fiscal risk due to disasters; (ii) financial management of disaster risk, including the implementation of innovative financial instruments; and (iii) catastrophe risk insurance for assets. To achieve these objectives, the MHCP is collaborating with entities from across the government and with international partners such as the World Bank, Swiss State Secretariat for Economic Affairs (SECO) and the Global Facility for Disaster Reduction and Recovery (GFDRR).

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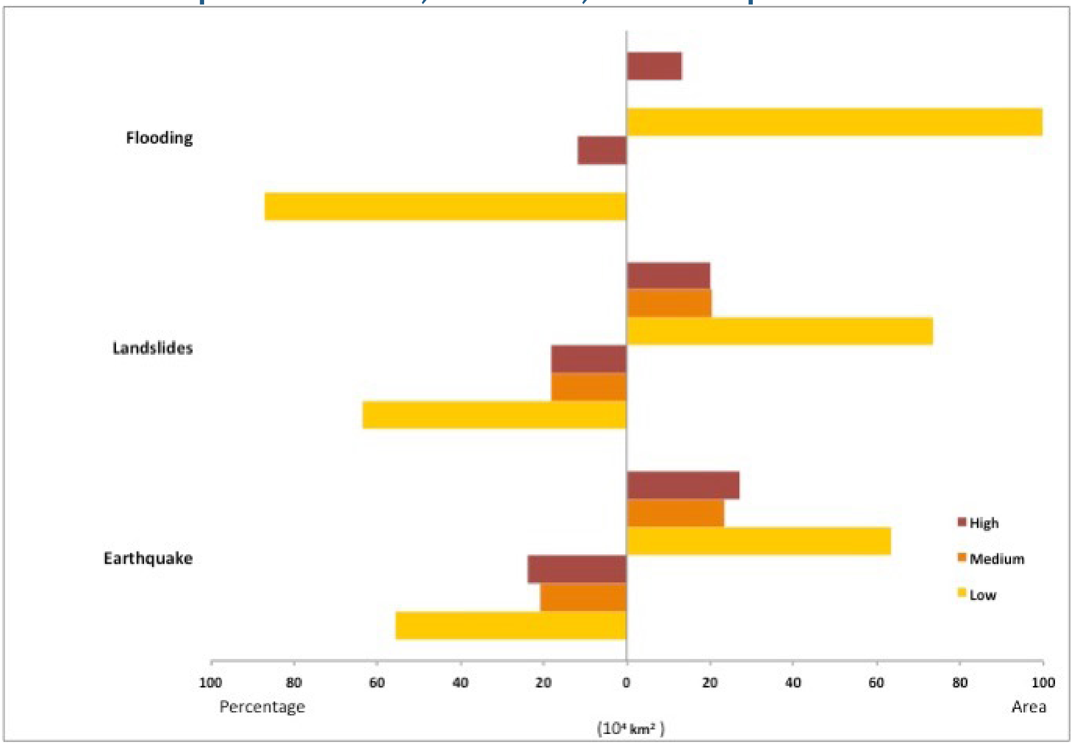
Annex 1. Disaster impacts in Colombia

According to the World Bank (2012), disasters in Colombia over the last 40 years have caused accumulated losses amounting to US$7.1 billion. Between 1970 and 2011, over 28,000 disaster events were registered, with approximately 60 percent reported since the 1990s.

According to the same report, 44 percent of Colombia's territory is exposed to high and medium seismic hazard, mostly in the Pacific and Andean Regions (departments of Huila, Choco, Valle del Cauca, Nariño, Risaralda, Cauca, and Quindio), which means that 960 municipalities, including those with the largest populations, are exposed. Some 12 percent of the national territory is located in areas with increased vulnerability to floods, affecting 79 municipalities mainly in the departments of Valle del Cauca, Atlantico, Cundinamarca, Magdalena, Antioquia, Cordoba, Cesar, Cauca, and Meta. Additionally, 18 percent of the national territory is located in areas that have high and very high landslide risk, especially in the departments of Quindio, Risaralda, Caldas, Nariño, Cauca, Arauca, Meta, Huila, Cundinamarca, Boyaca, Tolima, and Santander.

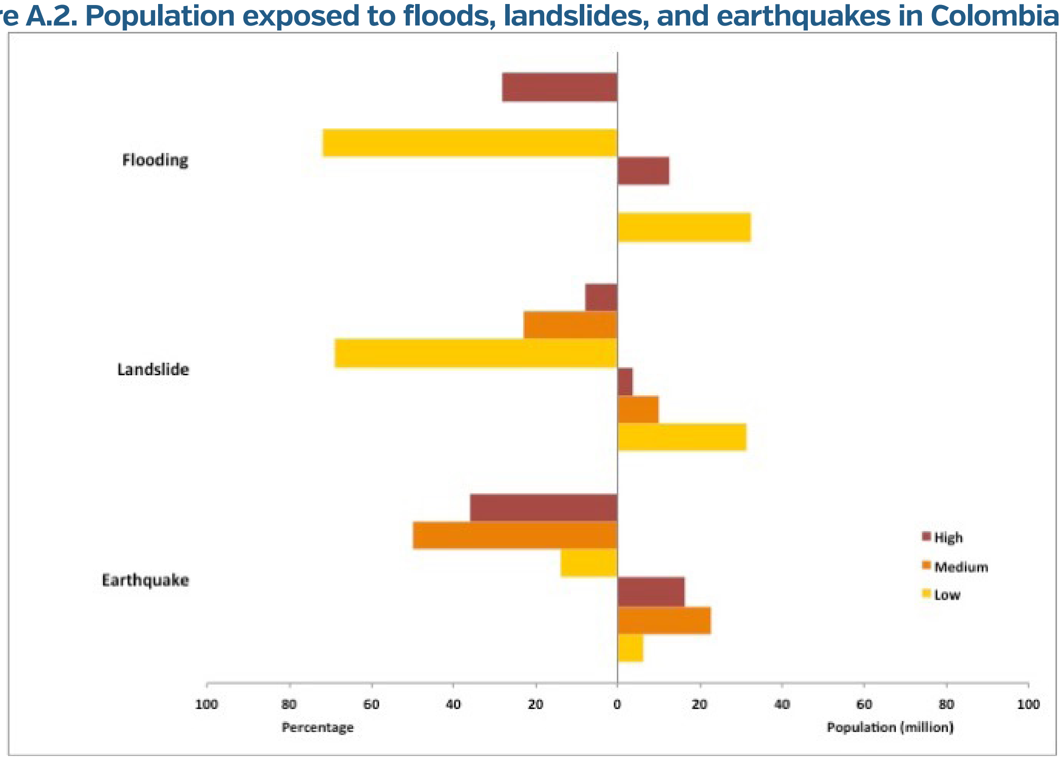
The distribution of the exposure of the population to natural hazards such as flooding, earthquakes, and landslides is illustrated in the following figures.

Figure A.1. Area exposed to floods, landslides, and earthquakes in Colombia



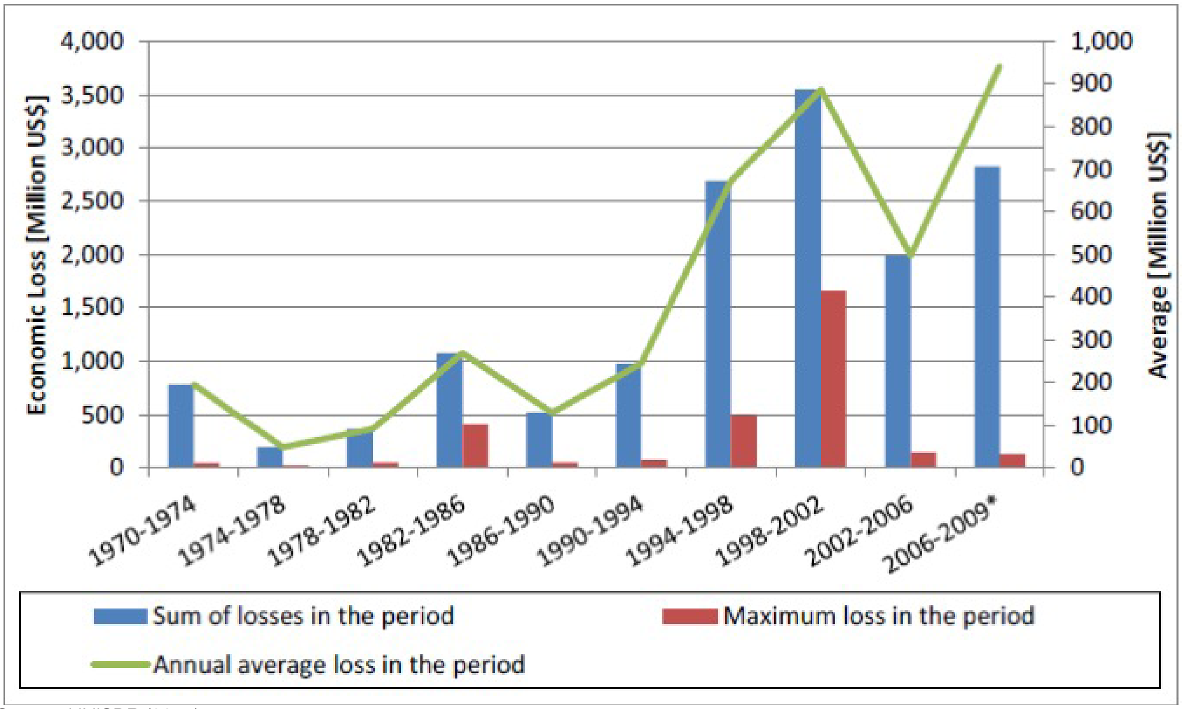
Source: World Bank (2012). Campos A.; Holm-Nielsen N.; Díaz C.; Rubiano D.; Costa C.; Ramírez F.; Dickson E. (Ed). Análisis de la gestión del riesgo de desastres en Colombia: un aporte para la construcción de políticas públicas. Bogotá, Colombia.

Figure A.2. Population exposed to floods, landslides, and earthquakes in Colombia



Source: World Bank (2012). Campos A.; Holm-Nielsen N.; Díaz C.; Rubiano D.; Costa C.; Ramírez F.; Dickson E. (Ed). Análisis de la gestión del riesgo de desastres en Colombia: un aporte para la construcción de políticas públicas. Bogotá, Colombia.

Figure A.3. Economic Losses per Presidential Period for Colombia



Source: UNISDR (2011).

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