



Universidad de Oviedo



Erasmus Mundus Master Course in Public Health in Disasters

Master Thesis

Analysis on the evolution of disaster management policies and legislations in four countries of South America: Chile, Colombia, Peru and Venezuela

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I hereby certify that this thesis entitled “Analysis on the evolution of disaster management policies and legislations in four countries of South America: Chile, Colombia, Peru and Venezuela” is my own work. All sources of information reported by others are indicated in the list of references in accordance with the international guidelines.

Signature:

I, Pedro Arcos González approve this thesis for submission.

Signature:

LIST OF ABBREVIATIONS

| | |
|----------|--|
| DNPCAD | National Direction for Civil Protection and Disaster Management – <i>Dirección Nacional de Protección Civil y Administración de Desastres</i> (Venezuela). |
| FUNVISIS | Venezuelan Foundation of Seismologic Research – <i>Fundación Venezolana de Investigaciones Sismológicas</i> (Venezuela). |
| HFA | Hyogo Framework for Action 2005 - 2015. |
| IDNDR | International Decade for Natural Disaster Reduction. |
| INDECI | National Institute of Civil Defense – <i>Instituto Nacional de Defensa Civil</i> (Peru). |
| JAN | National Assistance Joint – <i>Junta de Asistencia Nacional</i> (Peru). |
| OCHA | Office for the Coordination of Humanitarian Affairs. |
| ONEMI | National Office of Emergency of the Ministry of Interior (Chile). |
| PNPAD | National Plan for Prevention and Disaster Management – <i>Plan Nacional para la Prevención y Atención de Desastres</i> (Colombia). |
| PREDES | Centre for Studies and Prevention of Disasters – <i>Centro de Estudios y Prevención de Desastres</i> (Peru). |
| SINADECI | National System of Civil Defense – <i>Sistema Nacional de Defensa Civil</i> (Peru). |
| SINAGERD | National System of Disaster Risk Management - <i>Sistema Nacional de Gestión de Riesgos de Desastres</i> (Peru). |
| SNPAD | National System for Prevention and Disaster Management - <i>Sistema Nacional para la Prevención y Atención de Desastres</i> (Colombia). |
| UN | United Nations. |
| UNDRO | United Nations Disaster Relief Office. |
| UN/GA | United Nations General Assembly. |
| UNISDR | United Nations International Strategy for Disaster Reduction. |
| WHO | World Health Organization. |

ABSTRACT

Background: Disaster management has considerable impact on the wellbeing of the population. Policies and legislations for disaster management are determinants of health, and as such, it is relevant to analyze their evolution and current condition in order to gain a better understanding of their role on the population's welfare. The aim of this study was to analyze the evolution of the policies and legislations for disaster management in Chile, Colombia, Peru, Venezuela and in the global context; and to compare the progress made in policies and legislations for disaster management in these four countries.

Methods: Legal documents, laws, decrees, legislations, grey literature and information provided by official institutions in the field of disaster management were reviewed in order to describe the chronological evolution of policies and legislations regarding disaster management in four countries of South America: Chile, Colombia, Peru and Venezuela was conducted.

Findings: Venezuela issued the first disaster related legislation in 1936, Chile and Colombia in 1965, while Peru in 1972. The four countries modified their disaster policies periodically. Nevertheless, it was not possible to find any documents related to disaster management in Venezuela from 1971 to 1999. The most recent legal development in the disaster field, amongst the countries included in this study, was made in Colombia in 2016. The terminology used in disaster management legislations in the four countries was similar.

Conclusions: The United Nations General Assembly has played a relevant role in the development of policies to reduce disaster risk globally. Differences in the implementation of certain legislations in the group of countries included in this study were found, in years of issue and the scope of action. Nevertheless, the terminology, the objectives and the means to achieve them is, in certain ways, similar for all of them, evidencing the social similarities that Chile, Colombia, Peru and Venezuela hold when it comes to disaster management.

Key words: policies and legislations, disaster management, Chile, Colombia, Peru, Venezuela.

TABLE OF CONTENTS

| | |
|--|-----------|
| INTRODUCTION | 1 |
| BACKGROUND | 4 |
| METHODS | 10 |
| FINDINGS | 11 |
| CHILE | 11 |
| COLOMBIA | 14 |
| PERU | 18 |
| VENEZUELA | 23 |
| DISCUSSION | 28 |
| CONCLUSIONS AND RECOMMENDATIONS | 32 |
| ACKNOWLEDGEMENTS | 33 |
| REFERENCES | 34 |

LIST OF TABLES

| | |
|---|-----------|
| Table 1: Advancements in legislations for disaster management over the years in Chile..... | 13 |
| Table 2: Advancements in legislations for disaster management over the years in Colombia..... | 17 |
| Table 3: Advancements in legislations for disaster management over the years in Peru..... | 22 |
| Table 4: Advancements in legislations for disaster management over the years in Venezuela..... | 28 |

LIST OF GRAPHS

| | |
|---|-----------|
| Graph 1: Disaster reports by decade..... | 2 |
| Graph 2: Total deaths from disasters proportional to population by decade..... | 31 |

INTRODUCTION

Public health denotes the set of measures, from public or private sort, destined to prevent disease, promote health and prolong life among the population. The actions related to this matter are addressed to entire populations with the objective of provide ideal conditions in which people can live a healthy life. Thereby, public health involves the entire scope of the welfare system and focuses on any element that represents a threat to the health status of the population.¹

According to the World Health Organization (WHO) the social determinants of health are the circumstances in which people are born, live, work and age and the factors that influence these conditions: policies and legislations, development agendas, social norms and political system.² Considering the importance of country policies as a health determinant of the population and given of the impact those policies can have on distribution of wealth, provision of health services and quality of life, we consider relevant to study the characteristics of those policies that shape the wellbeing of the population.

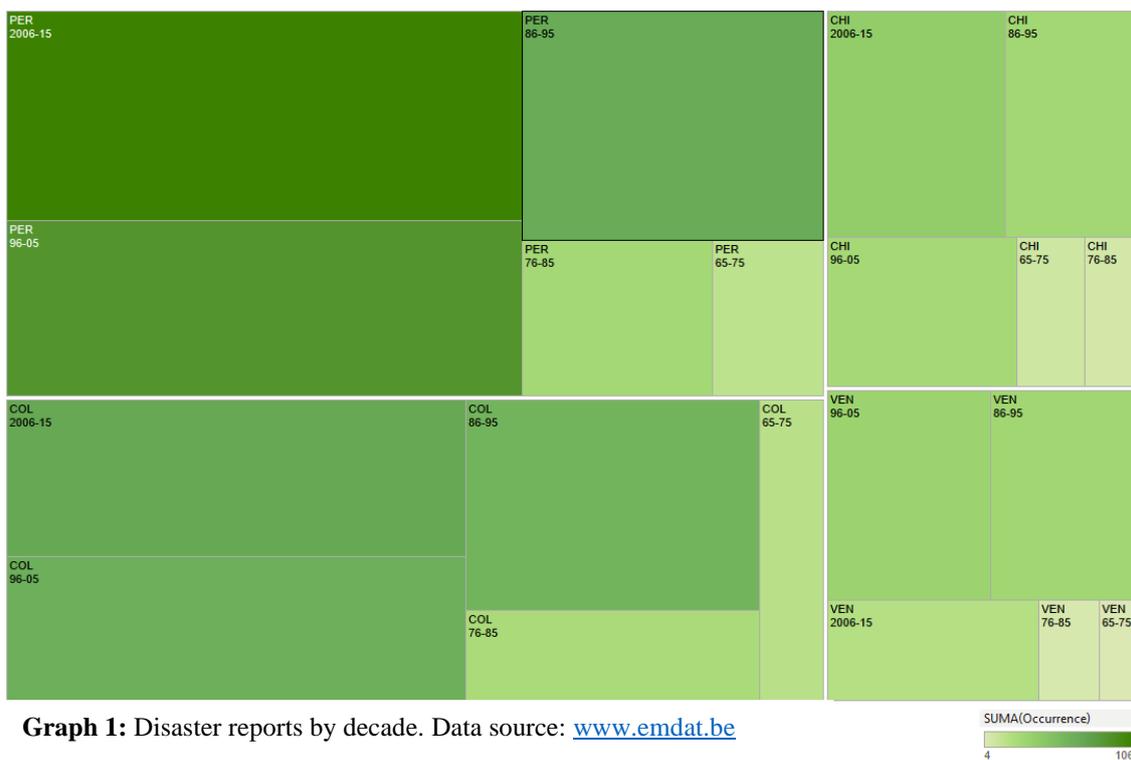
The UNISDR defines a disaster as “A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources” and disaster management as “The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster”.³

In the same way that taxation policies can affect the economic status or dietary habits of the population, for example if a government establishes a high taxation on certain food items, people will reduce its consumption; policies related to disaster management and disaster risk reduction have a considerable impact on people’s possibilities of survival against hazards and on their livelihoods. Without forgetting about the direct effects of climate change on the health of the population: heat stress, floods, droughts, increased frequency of storms. These events will also have indirect effects on health through air pollution, breeding of vectors, food insecurity.⁴

Thus, it is important to design and implement adequate policies and legislations to overcome the consequences of disasters and climate change and to improve the health

conditions of the population. In order to act accordingly and develop adequate and updated laws, it results significantly important to identify the strategies implemented in the past and their flaws to obtain new policies that work according to the current needs and realities.

Apart from policies and legislations, there are a number of elements such as poverty, economic inequality, unplanned urbanization, indigenous communities without adequate health services, crime rates and others, that make low-and-middle income countries and especially Latin America, a vulnerable region against several hazards. Latin America and the Caribbean have been globally among the most disaster prone regions. If we compare the years 1971-1975 to 2002-2005, droughts raised by 360% in frequency, as well as hurricanes 521% and floods 266%. Moreover, the region of The Andes is particularly vulnerable to floods, earthquakes and volcanic activity.⁵



Graph 1: Disaster reports by decade. Data source: www.emdat.be

There has been an increase in the frequency and severity of natural and man-made disasters in the last 20 years, and this has become a matter of great concern to the international community.⁶ Graph 1 displays the occurrence of natural, complex and technological disasters represented by size and color intensity, divided by country and decade from 1965 to 2015.⁷ Graph 1 also shows a progressive increase in disaster reports for the majority of cases. An exception can be observed in Venezuela in the decade of

1995 – 2005, that could be related to the Vargas landslides in 1999, which triggered a series of floods and landslides and increased considerably the awareness towards disasters in the country.⁸

Moreover, according to the data presented in Graph 1, Peru is the country with most disaster reports in the last 20 years, followed by Colombia and finally Chile and Venezuela respectively. In this manner, the fact that Peru and Colombia are the countries with the highest number of reports in the last two decades, could be related to the number of updates that the above-mentioned two countries have implemented historically and the awareness that institutions have gained through the years. It would be interesting to study the relationship between disaster reports and legislations for disaster management.

Even though every country in The Andean community has developed policies related to disaster management, in harmony with the Millennium Development Goals, the United Nations International Strategy for Disaster Reduction (UNISDR), the Hyogo Framework of Action 2005 - 2015 (HFA) and other international agreements; each country has very different capacities to deal effectively with the impact of disasters towards the protection of the population.⁵ Studying the evolution of those policies and legislations could contribute to the understanding of the current ability of governments to cope with disaster situation. These reasons and its consequences on public health, are the main motivation to develop this study and to find an answer to the following research question: What are the policies and legislations for disaster management in Chile, Colombia, Peru, Venezuela and how have they progressed?

In the literature review made in Prevention Web, Relief Web, Google Scholar, United Nations Website and Official Governmental Websites, it was not possible to find an analysis on the evolution of disaster management policies and legislations in Chile, Colombia, Peru and Venezuela. Chile and Peru have similarities related to the presence of hazards, geographical location in the Pacific coast and The Andes Cordillera. Likewise, Venezuela and Colombia share particularities by being in the Caribbean coast and in the Andean region, without mentioning the cultural background that these four countries share. As researcher, coming from Venezuela, considering the gap on research related to this topic and possessing cultural affinity with the Andean Region, I have formulated the following aims for this study:

- To analyze the historical evolution of disaster management policies and legislations globally.
- To analyze the historical evolution of disaster management policies and legislations in Chile, Colombia, Peru and Venezuela.
- To compare the chronological progress made in disaster management policies and legislations in Chile, Colombia, Peru and Venezuela.

Background

Disasters caused by natural hazards such as earthquakes, floods, landslides, droughts, wildfires and storms, not only have left a considerable amount of human losses, but great damage to the economic and social infrastructure, as well as negative impact in vulnerable ecosystems. Between the years 1960 and 2000 there was an important increase in frequency, severity and intensity of disasters, especially in the 1990s, and the international community has made evident its great concern on this trend.⁹

Over time, the field of disaster risk reduction has significantly broadened. Global awareness has increased, gaining recognition from national governments and different organizations, and the constant release of resolutions and decrees after major disaster from the United Nations General Assembly (UN/GA) have contributed to this growth.

The following list of catastrophic events and subsequent actions in the 1960s decade from the UN General Assembly provides an image of the implemented measures related to significant disasters:¹⁰

- In the year 1962, after the Buyin-Zara earthquake in the north-western region of Iran which left a death toll of approximately 12,000 people, the UN General Assembly through the resolution 1753, issued a set of measures to adopt in relation to this event. Among this measures were to increase the assistance, to consider qualified projects to rehabilitate the people and economy of the region, to improve seismic observations and regulations for earthquake-resistant structures.¹¹
- In 1963 the Skopje earthquake in Yugoslavia took more than 1,200 lives, causing great material and cultural damage as well. In the same year a hurricane hit the Caribbean, affecting Cuba, Dominican Republic, Haiti, Jamaica and Trinidad and Tobago and consequently, the UN released resolutions 1882 and 1888 mainly, encouraging member states and non-governmental organizations to continue the

humanitarian assistance and requesting the heads of specialized agencies such as the World Food Programme, United Nations Children fund, the Director of the Special fund among others to consider the immediate and long-term needs of those countries.¹²

- Afterwards, in 1965 the General Assembly, through resolution 2034, requests assistance in cases of natural disasters, recalling Economic and Social council resolution 1049 “requesting the Secretary-General to make a study of the types of assistance that UN might provide, the order of magnitude of the resources... including the establishment of a United Nations (UN) fund for assistance in cases of natural disasters, financed through voluntary contributions”. Consequently, offering that guidance and technical assistance in articulating pre-disaster plans to countries that requested it, as well as assistance post-disaster with plans of rehabilitation and reconstruction.¹³
- In October 1968, few months after the 7.4 magnitude earthquake in Iran that left 10,000 deaths, 10 towns and 170 villages destroyed, the UN General Assembly requested through the resolution 2378 to the different specialized agencies to take into consideration the needs of the Government of Iran to respond to the catastrophe.¹⁴

Subsequently, during the decades of 1970 and 1980 there was important progression regarding assistance in cases of natural disasters:

- In 1970 resolution 2717, Assistance in cases of natural disaster; the General Assembly motivated by the serious human, economic and social damage suffered by countries recently afflicted by disasters of natural origin, invited the Secretary-General to include recommendations related to Pre-disaster planning, determining the mechanisms and emergency provisions to respond effectively to disaster situations right after the moment of the event. Also the utilization of technology and scientific research towards prevention and mitigation of natural disasters, besides the dissemination of information produced by research to all countries, aiming to reinforce international cooperation to identify the initial manifestations of potential disasters and develop early warning systems.¹⁵
- Year 1971, creation of the United Nations Disaster Relief Office (UNDRO). In resolution 2816, The General Assembly asks the Secretary-General to designate a Disaster Relief Coordinator for the UNDRO as a permanent office of the United

Nations, who will be in charge of establishing closest operations with all relevant organizations to ensure effective assistance when needed, acknowledging the crucial participation in disaster relief by the International Red Cross. Also to assist the afflicted country to assess and prioritize the needs, to distribute that information to potential donors and provide assistance to locate external aid; to carry out pre-disaster planning study, prevention, control and forecast of natural disasters in cooperation with governments. The General Assembly through resolution 2816 invites governments to appoint a national disaster relief coordinator to be receptor of international aid in emergencies; to consider legislative measures to facilitate the reception of aid, landing rights and privileges for relief teams and encourages governments to improve national disaster warning systems.¹⁶

- From the years 1972 to 1981, the UN General Assembly continued strengthening the activities concerning the Disaster Relief Office through several resolutions, among those the resolution 2959 in which the UN/GA restate the crucial importance of assistance to disaster-prone countries in preparedness, prevention and response plans, in order to mitigate the impact of disasters. Consequently, in resolutions 3345, 33/22 and 34/55 the Secretary-General is requested to look for the possibility to implement measures to strengthen UN mechanisms concerning disaster prevention and pre-disaster planning, the Governing Council of the United Nations Development Program is requested to consider the inclusion of technical cooperation activities for disaster prevention and preparedness which is approved later on.¹⁰

On the other hand, human intervention can make a big difference in the vulnerability of communities towards the reduction or increment in the impact of natural and technological hazards, focusing on socioeconomic factors that determine such vulnerabilities. Accordingly, great progress on reducing vulnerability to disasters can be achieved by implementing strategies on prevention and mitigation, also developing early warning systems, educating the communities on disaster risk reduction, construction practices and the potential hazards present in the environment.¹⁰

Considering the abovementioned factors, the international community decided to release the so-called International Decade for Natural Disaster Reduction (IDNDR), released by the UN/GA in 1989 and its main goal was to create awareness of the importance that

disaster reduction represents. This initiative has triggered a conceptual change in the approach towards disaster management, going from an approach focused on response to catastrophes, to one with emphasis on disaster reduction by enhancing the role of human activities. The following list of events illustrate the progression towards the implementation of the International Decade for Natural Disaster Reduction:¹⁰

- In resolution 42/169 of 1987 UN/GA recognizes the importance of reducing the impact of natural disasters especially in developing countries, the importance for further scientific and technical understanding of origin and effects of natural disasters towards achieving positive results in this field. In this resolution 42/169 the UN/GA decides to appoint the 1990s as the decade in which the international community will advance on cooperation in the scope of disaster reduction, under the auspice of the United Nations. The objective of the decade is to reduce through international joint action, especially in developing countries, human loss, economic and social damage caused by natural disasters.¹⁷ Later on, the General Assembly, as preparation for the Decade for Natural Disaster Reduction, receives the progress report from the Secretary-General and requests for the development of a framework of action through resolution 43/202.¹⁸
- The General Assembly at its 44th session in 1989, declares the International Decade for Natural Disaster Reduction, designates the second Wednesday of October as International Day for Natural Disaster Reduction for the international community to monitor every year during the decade and continue contributing to its goals and objectives, approves the International Framework of Action, attached to the resolution 44/236 and to be used to fulfil the goals of the IDNDR.¹⁹
- The World Conference on Disaster Reduction took place in Yokohama, Japan in May 1994. The UN/GA ratifies in resolution 49/22A the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, principally its Plan of Action adopted in the world conference.¹⁰
- For the conclusion of the IDNDR, the Secretariat in the United Nations organized the IDNDR Programme Forum in 1999 as part of the closing event and it contributed with a platform for global dialogue among several concerned parts within the IDNDR. In this Programme Forum 1999, more than 40 thematic sessions concerning the importance of disaster prevention were presented, as well as panels, poster sessions, exhibits and an open public forum, all these activities

with the objective of illustrate an outline of the achievements of the IDNDR at all levels. The results of the Programme Forum would have great influence on the UN Economic Social Council considerations on the IDNDR. The awareness about the impact of disasters on social and economic structure of communities is clearer and the greatest challenge of the decade is to create and strengthen a culture of prevention globally.¹⁰

The implementation of integral disaster reduction strategies, instead of focusing only in response, represents an effective way to use resources and it is compatible with the sustainable development of nations. One of the alternatives to achieve the better use of resources is to implement an international strategy for disaster reduction, which allows communities to increase coping capacities towards the consequences of natural, technological and environmental hazards.

Based on the premise of an integral disaster reduction plan, considering the resolution 1999/63 of the Economic and Social Council in which the Council discussed on the successor measures for the IDNDR and recognizes the accomplishment of its goals, the UN/GA supports the proposal for the creation of an inter-agency task force to maintain the attention on the International Day for Disaster Reduction and to effectively implement the International Strategy for Disaster Reduction (ISDR).

Consequently, The World Summit on Sustainable Development took place in Johannesburg, South Africa in the year 2002 and issued a set of objectives for the ISDR, within the sustainable development agenda, with the intention of integrating disaster risk reduction and put efforts together along with partners of the Inter-Agency Task force on Disaster Reduction to generate development policies and processes.¹⁰

The International Strategy for Disaster Reduction was released on the foundations of the International Decade for Natural Disaster Reduction and it merged important documents that were endorsed during the decade, among those are the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action and "A Safer World in the 21st Century: Disaster and Risk Reduction".²⁰ The International Strategy for Disaster Reduction had the purpose of creating public awareness of the risks on natural, technological and environmental hazards represent on communities, increase commitment by the governmental authorities to reduce the risks

of society and enhance public participation to make peoples resilient towards potential disasters, all of these in congruence with sustainable development.

As part of the International Strategy for Disaster Reduction, the UN/GA decides to summon the World Conference on Disaster Reduction in 2005 as conclusion to the review of the Yokohama Strategy and its Plan of Action, with the objective of guaranteeing the conditions for the Plan of Implementation of the World Summit on sustainable development on vulnerability, risk assessment and disaster management, to analyze the lessons learned to enhance disaster reduction, spread information and increase awareness of the importance of disaster related policies. Accordingly, on resolution 60/195 the UN/GA ratifies the Hyogo Declaration and the Hyogo Framework for Action 2005-2015: building the resilience of nations and communities to disasters embraced by the World Conference on Disaster Reduction in Kobe, Japan.¹⁰

Subsequently, in the third United Nations Conference on Disaster Risk Reduction, the Sendai Framework for Disaster Risk Reduction 2015-2030 was embraced by the member states on March 2015 in Sendai City, Japan. The Sendai Framework is the first main treaty of the development agenda post-2015 and it is a voluntary and non-binding agreement which acknowledges the main role of the State in reducing disaster risk, but at the same time that duty should be shared between different stakeholders, including the regional and local governments, the private sector and the community.²¹

The Sendai Framework appears as a replacement of the HFA 2005-2015 and it is a result of consultations made to the stakeholders which started in March 2012 and inter-governmental negotiations that took place between 2014 and 2015 mediated by the United Nations International Strategy for Disaster Reduction. The objective of the Sendai Framework is to achieve “The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries”.²¹

Finally, it is pertinent to mention the UN/GA resolution 46/182, adopted in December 1991. It established guidelines for humanitarian coordination reinforcing the response to complex emergencies and natural disaster by addressing them to a particular focal point, enhancing the position of UN Disaster Relief Coordinator and renaming it Emergency Relief Coordinator. After the resolution was implemented the UN Secretary-General constituted the Department of Humanitarian Affairs, which in 1998 would be transformed

into the Office for the Coordination of Humanitarian Affairs (OCHA), taking responsibility for coordination of humanitarian response, policy development and humanitarian promotion.^{22, 23}

METHODS

Qualitative descriptive designs are commonly a combination of sampling, data collection techniques and re-presentation techniques. Qualitative description contributes to provide straight answers to questions relevant to practitioners and policy makers. In qualitative descriptive studies the method of election is qualitative content analysis, which is a dynamic way of analyzing data focused on summarizing the informational content of such data.²⁴

Content analysis is research technique that allows the researcher to produce reproducible and valid interpretations from texts to the context of their use. This scientific tool offers new insights, enhances the researcher's understanding of specific events or informs practical actions.²⁵

The purpose of content analysis is to describe the features of a document's content.²⁶ In this study we describe the chronological evolution of policies, strategies and legislations regarding disaster management in four countries of South America: Chile, Colombia, Peru and Venezuela.

The data collected consisted in legal documents, laws, decrees, legislations, grey literature and information provided by official institutions related to disaster management. The search was carried out using the following key words: policies, legislations, laws, strategies, disaster management, risk reduction, laws in disasters, civil protection and historical evolution of disaster laws. The information and the legal documents found through the search were mostly in Spanish and were classified chronologically by date of issue, by country and then analyzed and re-presented in this document. The legal documents found were studied and then the main aspects of them were synthesized and stated. The sources of information were official websites of the United Nations, Ministries of Internal Affairs, Defense, Health, President-Secretariat and governmental institutions in charge of disaster management such as the institutions of Civil Protection from the countries included in the study, Red Cross and ONEMI. Subsequently we presented the information in tables to facilitate the analysis and

comparison of the evolution of the legislations between Chile, Colombia, Peru and Venezuela.

Documents without reliable source, lacking date, source or containing information that could not be confirmed by any mean were excluded.

FINDINGS

Chile

The integral approach of disaster management has become a necessity and a priority in the international community and progressively, Chile has joined this trend. The geographical and physical characteristics of the country make it prone to suffer disasters from diverse origin. In addition, demographic, social, economic and political conditions increase the risk to hazards, exposing its population and infrastructure to significant economic, environmental and human losses.²⁷

The Republic of Chile is located in the region of the “Pacific ring of fire”, therefore, is one of the most seismic countries in the world. It is constantly affected by both natural and man-made hazards, among those are earthquakes, tsunamis, volcanic eruptions, droughts, storms, floods, fires and explosions. A considerable number of those, end up in a disaster.²⁷ Also, Chile’s climate is highly influenced by the pacific anticyclone, which makes the northern part of the country particularly arid.

On the other hand, disaster risk reduction policies have become a national concern. After the earthquake occurred on March 28th 1965 in the provinces of Aconcagua, Valparaiso and Santiago, the Law N° 16.282 was introduced, and it was of the first legislations related to catastrophic events, by the name of Permanent dispositions for seismic cases and catastrophes – *Disposiciones Permanentes para casos de Sismos y Catástrofes*. This law 16.282 was published on July 28th 1965 and it focused on the President’s duties and the measures that can be applied for a period of 12 months which could be extended, to respond to a seismic event or catastrophe, within the country or outside its borders and the collection and deployment of resources for humanitarian aid. Accordingly, it establishes the regulations for donations and loans to recover from a disaster and assistance from the government for reconstruction of property. Consequently, the law was modified several times and it was complemented by conventions on land ownership and reassignment.²⁸ In summary, the abovementioned law established guidelines for disaster

response, taking into consideration the management of resources, regulation of land ownership, aid of affected population, among other elements. Nevertheless, it lacked in content related to disaster prevention and preparedness.

Subsequently, in March 1974 the Ministry of Interior creates the National Office of Emergency – *Oficina Nacional de Emergencia* (ONEMI) through the decree of law N° 369 driven by the need to develop an institution in charge of planning and coordinating human and material resources from public and private entities, to avoid or minimize the damage produce by seismic events or catastrophes.²⁹ Through this decree, the functions established by the law 16.282 nine years before, were placed in charge of this new institution, ONEMI. Hence, from the year 1974, ONEMI was delegated to organize, plan and execute the activities in order to prevent and respond to the effects of natural and man-made disasters, in addition to coordinate the efforts and collaboration offered by the Firemen Department, Red Cross, Civil Defense, Andean Relief Body, Aerial Federation of Chile and any other volunteer entity. Finally, with the creation of this institution it was appointed to establish regional and local emergency committees with the participation of the Army and the Police force.

Correspondingly, the ONEMI's Regulations were released in 1983 with the mandate to constitute Emergency Committees at a regional, provincial and communal level, with permanent working commissions. Also to establish Operational Emergency Centers, which are spaces where the personnel in charge of managing emergency or disaster situations will carry on the necessary activities to cope with such events.

With the purpose of decentralizing duties and responsibilities, in November 1992 the Organic Constitutional Law on Government and Regional Administration – *Ley Orgánica Constitucional sobre Gobierno y Administración Regional*, law N° 19.175, assigned the Governors and Intendents to take the necessary measures to cope with emergency situations and the Regional Government to develop prevention and protection programs to avoid catastrophes.³⁰ Likewise, the Organic Constitutional Law on Municipalities – *Ley Orgánica Constitucional de Municipalidades*, law N° 18.695 from 2006, allows these autonomous entities of public authority to develop directly or along with other governmental institutions functions related to risk prevention and delivery of aid in emergencies.³¹

In 1977 by Supreme Decree N° 155, the National Emergency Plan was approved and this one was replaced by the National Plan of Civil Protection – *Plan Nacional de Protección Civil* in 2002 which provided guidelines for permanent promotion and organization of activities to integrate institutions belonging to the civil protection system and in the community to the vision, strategies and preventive actions, as well as promoting and executing trainings and educative activities in prevention and preparedness.³² The National Plan of 2002 stated the need to work in accordance with the International Decade for Natural Disaster Reduction.

The National Emergency Plan was replaced because of the need to respond to the current issues in Chile related to development and modernization in the productive sector. Also, the National Plan of Civil Protection of 2002 fits with the redesign of the Public Administration that the Government was striving to accomplish. Moreover, the new plan had to address the areas regarding prevention, mitigation, preparedness and early warning, to be able to fulfil the international commitments such as the International Decade for Natural Disaster Reduction and the modernization of the local National System of Civil Protection.³²

| Chile | | |
|-------|---|---|
| Year | Legislation | Contents |
| 1965 | Law N° 16.282 Permanent dispositions for seismic cases and catastrophes – <i>Disposiciones Permanentes para casos de Sismos y Catástrofes</i> | - Measures to respond to seismic catastrophes, either within or outside Chile. - Regulations to finance recovery actions. |
| 1974 | Law N° 369 Creation of the National Office of Emergency – <i>Oficina Nacional de Emergencia</i> | - Creates an institution with the duty of planning and executing activities to prevent and respond to natural and man-made disasters and coordinate with other humanitarian institutions. |
| 1977 | Supreme Decree N° 155 National Plan of Emergency | - Guidelines to provide national security and protection to the population in case of catastrophe. |
| 1992 | Law N° 19.175 Organic Constitutional Law on Government and Regional Administration – <i>Ley Orgánica Constitucional sobre Gobierno y Administración Regional</i> | - Decentralize duties giving Governor and Intendents the authority to take measures to respond to emergency situations. Giving Regional Governments the |

| | | |
|------|---|---|
| | | responsibility to develop prevention programs. |
| 2002 | Supreme Decree N° 156 National Plan of Civil Protection – <i>Plan Nacional de Protección Civil</i> | - Guidelines for integration of the institutions of the Civil Protection System. - Guidelines for preventive actions, trainings and education for prevention and preparedness, in harmony with the IDNDR |

Table 1: Advancements in legislations for disaster management over the years in Chile.

Colombia

Considering the geographical position, soil characteristics, demographic distribution and economic conditions of the rural population in Colombia, there is a considerable exposure to hazards of different origin. Disaster risk management is a complex matter in the country, given the high rate of migration and unplanned urbanization which is worsen by the armed conflict in the rural areas.³³

According to estimations, 86% of the population is exposed to high or moderate seismic hazard, 28% to high risk of flood and 31% is exposed to high risk of landslides; this figures are crucial when it comes to the implementation of disaster management strategies, given the high number of population at risk. Also, historical data reveals that in the last 40 years, small and moderate scale disaster have caused 2.5 times more economic losses that large scale disasters.³⁴ The aforesaid arguments led the Colombian government to design and implement strategies focused on the development of capacities at the level of municipalities and departments.^{33, 34}

Regarding the first institutions of disaster management in Colombia, in 1948 the National Aid – *Socorro Nacional* under the mandate of the Colombian Red Cross, to assist the Army in the task of assist the population that suffer from calamities. Later on, in 1965 the legislative decree N° 3398 and decree N° 606 in 1967 organized and dictated the creation of a National Direction of Civil Defense – *Dirección Nacional de Defensa Civil*.³⁵

The National Direction of Civil Defense was declared a public institution seconded by the Ministry of National Defense in 1971 through decree N° 2341. Then in 1989, was added to the National System for Prevention and Disaster Management – *Sistema Nacional para la Prevención y Atención de Desastres* (SNPAD).

Although Colombia is exposed to a broad variety of hazards, the socio-economic impact of those hazards in the population was not assessed in such a way that the lessons from previous disasters could be documented and learn from them, in order to establish and implement strategies to prevent and respond to such catastrophes. However, in June 1984 the Ministry of Development, released Decree 1547 in Official Diary – *Diario Oficial* N° 36.681, to create the National Fund for Calamities – *Fondo Nacional de Calamidades* with several objectives: providing financial support for disaster management, giving priority to production, preservation and distribution of food items, medicines and temporary shelter; contain the spreading of epidemics; provide adequate sanitary conditions in the phases of rehabilitation and restoration; and financing the implementation of equipment for prevention, identification and management of disaster, focusing of seismography.³⁶

Later on, after the disaster caused by the activation of Volcano Del Ruíz in 1985, several governmental institutions started arranging the creation of a National System for Prevention and Disaster Management – *Sistema Nacional para la Prevención y Atención de Desastres*, which was officially created through Law 46 in November 1988 and fully organized through Law-Decree 919 in May 1989.^{37, 38} The National System had the responsibility to appoint duties to public and private entities for prevention, management, rehabilitation and restoration in case of disaster, integrate efforts between the different institutions guarantee the adequate management of human and financial resources. The members of the system were the national, regional and local committees for prevention and disaster management, the National Office for Disaster Management, the National Technical Committee for Prevention and Disaster Management, the National Operational Committee for Prevention and Disaster Management, the majority of ministries, decentralized institutions such as the National Institute of Geology and Mining, Colombian Civil Defense, the National Department of Planning, the Colombian Red Cross and private institutions among others. Law 919 of year 1989 was modified several time through legal documents.³⁹

Subsequently, in 1993, Law 99 is introduced creating the Ministry of Environment – *Ministerio del Medio Ambiente* and reorganizing the public sector. Among other upgrades to the national legislation related to the environment, Law 99 harmonizes the duties of national institutions with sustainable development, possibly influenced by the International Decade for Natural Disaster Reduction. Three years later, in October 1996,

Law 322 appoints the creation of the National System of Firemen, assigning the mission of prevent and tackle the calamities related to fires and adding the Firemen to the SNPAD.^{40, 41}

Furthermore, in 1998 the National Plan for Prevention and Disaster Management – *Plan Nacional para la Prevención y Atención de Desastres* (PNPAD) was approved with the mission of including every policy and program in the aspects of prevention, immediate response, rehabilitation and development related to any type of disaster; topics related to financing, education and training for the community, integrated communication systems, coordination between institutions and scientific research. Another main feature of the National Plan of 1998 is strengthening the strategies for disaster risk reduction, prevention, mitigation and sustainable development of vulnerable communities.⁴²

Likewise, in December 2001 the National Department of Planning, issued the CONPES Document 3146 called Strategy to consolidate the execution of the National Plan for Prevention and Disaster Management in short and medium term - *Estrategia para consolidar la ejecución del Plan Nacional para la Prevención y Atención De Desastres en el corto y mediano plazo*. CONPES Document 3146 presents priority actions to develop the PNPAD in a term of three years.⁴³

In relation to the Millennium Development Goals, in 2003 the government approved the National Plan of Development 2003-2006, Towards a community State - *Plan Nacional de Desarrollo 2003-2006, hacia un Estado comunitario*. In this plan the government addresses topics such as social equity, the provision of democratic security, sustainable economic growth and in chapter C “Building Social Equity”, numeral 8 is related to prevention and mitigation of natural hazards, strengthening the means of information for the community and tackling poverty and the economic vulnerabilities of the government in case of disasters.^{44, 45}

Consequently, the National Plan of Development 2011-2014 was released and it established goals related to technical assistance to develop plans in municipalities, hazard maps, raise awareness in the community, disaster risk reduction and preparedness but without mentioning specific actions. The National Plan of Development 2011-2014 contained key aspects that integrated later on the Law 1523 in 2012, issued to adopt the National Policy of Disaster Risk Management and to establish the National System of Disaster Risk Management - *Política Nacional de Gestión del Riesgo de Desastres y se*

establece el Sistema Nacional de Gestión del Riesgo de Desastres, it generated progress in the holistic approach of disaster management in Colombia. The Law 1523, not only focuses on mechanisms to respond to disasters, but in disaster preparedness and awareness. It also redefines the role of public and private institutions in disaster risk reduction. In addition, it promotes the use of people’s coping capacities as it says in article 3 numeral 4: “Principle of auto-preservation: every person has the duty to adopt the necessary measures to manage the risk in the personal sense of protection, this condition is essential to achieve collective solidarity”.⁴⁶ One year later, in September 2013, Decree N° 1974 is released and it contains the objectives, programs, actions, responsible institutions and budget to execute the processes related to risk awareness, reduction and management in the framework of the national development plan.⁴⁷

Finally, in February 2016 by Presidential Decree N° 308 the National Plan of Disaster Management for the period 2015 – 2025 is implemented by the name of “A strategy for development”. This is an update of the disaster management policy and it aims to improve the awareness on disaster risk, reduce the risk conditions in the national development and sustainable environment and reinforce the governance, education and dissemination of information related to disaster risk reduction.⁴⁸

| Colombia | | |
|----------|---|---|
| Year | Legislation | Contents |
| 1965 | Legislative Decree N° 3398 To organize the national defense - <i>Por el cual se organiza la defensa nacional</i> | - Creates the National Direction of Civil Defense |
| 1984 | Decree 1547 To create the National Fund for Calamities – <i>Fondo Nacional de Calamidades</i> | - Creates the National Fund for Calamities to provide financial support for disaster management, food items, medicines and shelter. |
| 1988 | Law 46 To create the National System for Prevention and Disaster Management – <i>Sistema Nacional para la Prevención y Atención de Desastres</i> | - The National System for Prevention and Disaster Management is entitled with the responsibility of prevention, management, rehabilitation and restoration in cases of disaster, through its member institutions. |
| 1996 | Law 322 To create the National System of Firemen | - It appoints the Firemen with the mission of prevent and tackle the calamities related to fires. |

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| 1998 | Decree 93 To approve the National Plan for Prevention and Disaster Management – <i>Plan Nacional para la Prevención y Atención de Desastres</i> | <ul style="list-style-type: none"> - Integrates the policies, programs and strategies of disaster risk reduction prevention, mitigation and sustainable development. - Enforces coordination with institutions for research and communication systems. |
| 2012 | Law 1523 National Policy of Disaster Risk Management and to establish the National System of Disaster Risk Management - <i>Política Nacional de Gestión del Riesgo de Desastres y se establece el Sistema Nacional de Gestión del Riesgo de Desastre</i> | <ul style="list-style-type: none"> - Defines the role of public and private institutions in disaster risk reduction, preparedness, awareness and response. - Acknowledges the importance of people’s capacities to cope in disaster situations. |
| 2016 | Presidential Decree N°308 To adopt National Plan of Disaster Management “A development strategy” for the period 2015 – 2025 - <i>Plan Nacional de Gestión del Riesgo de Desastres "Una Estrategia Desarrollo" para período 2015 - 2025</i> | <ul style="list-style-type: none"> - Aims to improve the awareness on disaster risk, reduce the risk conditions in a sustainable environment and reinforce governance, and education. |

Table 2: Advancements in legislations for disaster management over the years in Colombia.

Peru

Peru is located in the intertropical zone of South America, it is the third largest country of this continental region and it has a great diversity of micro-climates and natural resources. Peru’s climatic conditions and its geographical situation in the “Pacific ring of fire”, The Andes Cordillera and the Pacific Anticyclone make it highly complex for the implementation of disaster risk management strategies.^{49,6}

Disaster risk management is a social process oriented to prevent, reduce and permanently control the elements that put societies at risk of disaster, as well as the adequate preparation and response to catastrophes, taking into consideration the national policies, especially those related to economic, social and environmental factors in a sustainable manner. Disaster risk management is based on scientific research, guiding policies, strategies and actions at all levels in the government and society, to protect the population and their livelihoods.⁵⁰

Facing disasters in Peru has been a persistent task given the tectonic, oceanic and atmospheric characteristics of the country. Earthquakes, volcanic eruptions, tsunamis,

floods, El Niño, droughts, landslides, wild fires and epidemics are among the hazards that Peru is exposed to.⁵¹ One of the first precedent of disasters that had an impact in governmental actions towards disaster reduction was the earthquake in near Huancayo city, killing 150 persons, 216 injured and 3,000 homeless. After this event, the government gave the responsibility to respond to the National Assistance Joint – *Junta de Asistencia Nacional* (JAN), which was created by the government in the decade of 1950, and made a legal body through Law Decree N° 14508, as a social charity and aid organization.⁵² The National Assistance Joint along with the Committee for Disasters of Huancayo provided shelter, food and medical supplies, performing a very quick response. One of the biggest problems in the response to the earthquake was the lack of coordination between the national and international aid teams.⁵³

Nevertheless, from 1970 significant progress has been made in the capacity of prevention and response to emergencies from natural and man-made origin. On May 31st 1970, the Department of Ancash was hit by an earthquake of magnitude 7.8 on the Richter scale, the most destructive in the last century, it left a death toll of 67,000, 150,000 injured, 800,000 people lost their homes.⁵¹ After the catastrophe, by a presidential order an Emergency Relief Committee was designated under the direction of the Minister of Health at the time, Rolando Caro. The members of the committee and its president were military and it operated from the presidential palace.⁵³

Two years after the earthquake of Ancash, in March 28th 1972, the government released the Law of the Civil Defense National System – *Ley del Sistema Nacional de Defensa Civil*, Decree-Law N° 19338 creating the National System of Civil Defense – *Sistema Nacional de Defensa Civil* (SINADECI) and the National Institute of Civil Defence – *Instituto Nacional de Defensa Civil* (INDECI), after analyzing the lessons learned from the catastrophe and realizing a lack of coordination to respond to this kind of emergencies. Nevertheless, the system lacked the means to ensure compliance to the duties of the public authorities. Also, the different levels among the system (sectorial, regional, provincial and districts) did not understand clearly the responsibilities they had to attend, therefore, there were either duplicity of efforts or negligence.⁵⁴ The Decree-Law N° 19338 had several modifications and extensions through time: Legislative Decree N° 442 in September 1987, Supreme Resolution N° 0104-87-DE-SGMD in November 1987, Legislative Decree N° 735 in December 1991, Law N° 25414 in March 1992, Urgency

Decree N° 092-96 in November 1996, Legislative Decree N° 905 in June 1998, Urgency Decree N° 049-2000 in July 2000 and Supreme Decree N° 064-2002-PCM in July 2002.⁵⁵

A decade later, in April 1983, a group of workers motivated by the social impact that El Niño phenomenon had caused that year and by the high vulnerability of many communities to natural hazards, created the Centre for Studies and Prevention of Disasters – *Centro de Estudios y Prevención de Desastres* (PREDES). This institution was established with the objective of providing support to communities to prevent disasters, focused on development to tackle vulnerability, PREDES spread widely the concept of prevention among the population and the authorities.⁵⁶

Afterwards, in May 1988, the Regulations for the Law of the Civil Defense National System – *Reglamento de la Ley del Sistema Nacional de Defensa Civil*, by Supreme Decree N° 005-88-SGMD was released. The regulation specifies the operations of the National System of Civil Defense, which is the group of public and private institutions, policies and resources destined to the protection of the population in case of disasters of any origin, through prevention and rehabilitation to facilitate the normal development of the affected area. Likewise, SINADECI is in charge of fulfil the principles of humanitarian aid, self-assistance from the population, prioritize the collective need above the individual need, confluence of efforts and permanent and planned action. The following list explains the structure of SINADECI:

- The National Institute of Civil Defense as the head organization in charge of coordination.
- Civil Defense Committees at different hierarchical levels: regions, departments, provinces and districts.
- Sectorial and institutional offices of Civil Defense.
- Offices of Civil Defense in the local governments.⁵⁷

In the following years, different legislations approached the topic of disaster risk management, mainly the Political Constitution of Peru in 1993 in article 163 and 164, dictates that The State guarantees the security of the population through the National System of Defense which is permanent and integral, leaded by the president.⁵⁸ Other legislations related to disasters were the Law of the National System of Assessment of Environmental Impact N° 27446 in 2001, the Organic Law of Regional Governments N° 27867 in 2002 and Organic Law of Municipalities N° 27972 in 2003.⁵⁵

However, in March 2004 the National Plan of Prevention and Disaster Management - *Plan Nacional de Prevención y Atención de Desastres*, was issued by Supreme Decree N° 001-A-2004- SGMD. Highlighting the importance of preserving the indigenous peoples present in Peru, influenced by the progress report of the International Decade for Natural Disaster Reduction from 1995, focusing on involving the community in disaster risk reduction and on identifying and tackling vulnerabilities, needs and social problems in the community; the National Plan of 2004 changed the approach towards disaster management in Peru.⁵¹ The new program of disaster management was based on the modernization of methods to reduce risk with a timetable to achieve goals, on prevention and new technologies available.

According to INDECI, disaster risk is increasing in most regions of Peru. From 2003 to 2012 there were more than 44,000 reports of emergencies, affecting more than 11 million of inhabitants and causing damage to public and private infrastructure and agriculture, disrupting the normal development of communities. Taking into consideration the International Strategy for Disaster Reduction, the Millennium Development Goals and the Hyogo Framework for Action 2005-2015 in order to reduce the impact of disasters and to stop the increase of disaster risk from an integral approach, in accordance with sustainable development, Peruvian authorities made a significant shift in the framework of disaster risk reduction by approving the Law N° 29664 to create the National System of Disaster Risk Management - *Sistema Nacional de Gestión de Riesgos de Desastres* (SINAGERD) in 2011.⁴⁹

The SINAGERD Law implied the foundation of an integral and decentralized approach aiming to develop seven premises: risk assessment, prevention, risk reduction, preparedness, response, rehabilitation and restoration. In the same way, Law N° 29664 introduced changes in the institutional structure for disaster reduction, in order to achieve a higher level of management and coordination by the designation of the Presidency of the Ministers Council - *Presidencia del Consejo de Ministros* as director.^{49, 6}

Finally, after the creation of SINAGERD, in May 2014 came the introduction of the National Plan of Disaster Risk Management - *Plan Nacional de Gestión del Riesgo de Desastres 2014-2021* (PLANAGERD). As it is established in Law N° 29664, PLANAGERD is one of the main instruments of SINAGERD, it integrates the process of risk assessment, prevention, risk reduction, preparedness, response, rehabilitation and restoration and its goal is to generate strategic channels, objectives, protocols and actions

annually in order to accomplish the mandate of the SINAGERD Law. Also, the plan contemplates activities related to surveillance, monitoring and evaluation of progress.⁶

PLANAGERD was produced through the collaboration of the member institutions of SINAGERD: Secretary of Disaster Risk Management of the Presidency of the Ministers Council – *Secretaría de Gestión del Riesgo de Desastres de la Presidencia del Consejo de Ministros*, the National Institute of Civil Defence – *Instituto Nacional de Defensa Civil*, the Ministry of Economy and Finance, the National Centre for Strategic Planning and the National Centre of Assessment, Prevention and Disaster Risk Reduction - *Centro Nacional de Estimación, Prevención y Reducción del Riesgo de Desastres* (CENAPRED).⁶ CENAPRED is an institution in charge of coordinating, facilitating and supervising the implementation of the National Policy and the National Plan of Disaster Risk Management, also to provide technical assistance to the main coordinator of SINAGERD.⁵⁹

| Peru | | |
|------|---|--|
| Year | Legislation | Contents |
| 1972 | Decree-Law N° 19338 Law of the Civil Defense National System – <i>Ley del Sistema Nacional de Defensa Civil</i> | - Creation of the National System of Civil Defense – <i>Sistema Nacional de Defensa Civil</i> and the National Institute of Civil Defense – <i>Instituto Nacional de Defensa Civil</i> . - Overlapping of duties and couldn't assure compliance to the law. |
| 1988 | Supreme Decree N° 005-88-SGMD Regulations for the Law of the Civil Defense National System – <i>Reglamento de la Ley del Sistema Nacional de Defensa Civil</i> | - Specific guidelines for the operations of the National System of Civil Defense. |
| 1993 | Political Constitution of Peru in 1993 Articles 163 and 164 | - The State guarantees the security of the population through the National System of Defense |
| 2004 | Supreme Decree N° 001-A-2004- SGMD National Plan of Prevention and Disaster Management - <i>Plan Nacional de Prevención y Atención de Desastres</i> | - Highlighted the importance of indigenous peoples, the participation of the community in disaster risk reduction, the importance of prevention. |
| 2011 | Law N° 29664 To create the National System of Disaster Risk Management - <i>Sistema Nacional de Gestión de Riesgos de Desastres</i> | - Decentralized approach for the development of seven premises: risk assessment, prevention, risk reduction, |

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| | | preparedness, response, rehabilitation and restoration - Improving of coordination between institutions. |
| 2014 | National Plan of Disaster Risk Management - <i>Plan Nacional de Gestión del Riesgo de Desastres 2014-2021</i> | - Protocols and actions for the National System of Disaster Risk Management. - Guidelines for surveillance, monitoring and evaluation of progress. |

Table 3: Advancements in legislations for disaster management over the years in Peru.

Venezuela

Disaster risk and catastrophic events are progressively increasing, given that natural, technological and social factors have a greater impact all around the world. Although hazards by themselves do not provoke disasters, is vulnerability and exposure that influence directly the severity of disastrous events, plus the limited coping and recovering capacity.

One of the most important features of disaster risk reduction, is the joint action between the community, the private sector and good governance through the public entities.⁸ This adequate governance is partly dependent on pertinent laws and policies towards disaster management and risk reduction.

Venezuela is located in the northern coast of South America, it is a disaster prone country due to the exposure and vulnerability of the population and it is frequently affected by natural and technological hazards. The evolution of the policies and strategies in disaster management in Venezuela has been similar to other countries in the region. In the first stages they focused the attention on certain hazards that struck the country, such as earthquakes, floods and epidemics; and in the current times changing the approach towards risk reduction and impact to development process.⁶⁰

Currently in Venezuela, the entity in charge of disaster management is the Vice-ministry of Risk Management and Civil Protection – *Viceministerio para la Gestión de Riesgo y Protección Civil*, under the command of the Ministry of Interior and Justice. Nevertheless, the origins of Civil Protection in the country date back to the earthquake of 1812, the migration to the eastern part of Venezuela and the passage through The Andes, during the independence war, where the protection of human lives was critical and

marked the most significant events in the creation of Civil Defense, as it was called at that time.⁶¹

During the independence war due to the hostile conditions, there was a massive migration to the eastern region of Venezuela involving the majority of the population including elderly and children. This migration triggered the creation of several civil groups called “Subsistence Joints” in 1816, with the duty of providing shelter and food to the fleeing population, and constituted the first civil group of communal aid.⁶²

Afterwards, on March 23rd 1936 during President Eleazar López Contreras’ administration created the Aid Post to provide Medical Assistance to victims of accidents – *Puesto de Socorro para prestar Servicio Médico a las víctimas de accidentes*. Driven by the concern of prevention in case of catastrophes, they created the first legal instrument related to disaster management, the Law of First Aid Kits – *Ley de Botiquines de Emergencia*, through the Official Gazette N° 18.913. This law dictated the requirement of a first aid kit adequately equipped in every public transportation unit and all public places to be used in case of a calamity. The contents of the first aid kit were not specified in the legislation.^{60, 62}

Then in September 1943, President Isaías Medina Angarita through decree N° 175 creates the National Joint of Aid – *Junta Nacional de Socorro* under the Ministry of Health and Social Assistance, with the mission of providing assistance to the people affected by the Orinoco River floods and to attend calamities in the health sector. This represented the first historic allusion of a governmental institution destined to manage disasters in Venezuela. Likewise, in November 1943 through a resolution in Official Gazette N° 21.199, part of the funds from voluntary donors and from the National Treasure are destined to support victims of disasters. In the same decade, the Law against malaria – *Ley contra el paludismo* was released in order to tackle the outbreak that affected several states, and a law with measures to provide attention to the population affected by the so-called Revolution of October.^{60, 62}

Subsequently, the May 21st 1958 the Minister of Health and Social Assistance, Espiritu Santos Mendoza, releases regulations to create the Division of Aid and Civil Defense – *División de Socorro y Defensa Civil* under the Direction of Social Affairs, this is the first legal precedent in the field of Civil Defense in Venezuela. The same year in November, different entities such as the Venezuelan Red Cross, the Federal District Public Charity

Joint, Military Sanitation, Social Welfare Medical Services, University Hospital, Firemen Department, Scouts Association, Venezuelan Radio Club and Venezuelan Aero Club created the “Advisory Committee of the Aid Division”.⁶⁰

Beginning the 1960s, in July 1961 the National Commission of Aid – *Comisión Nacional de Socorro* is created by a presidential decree and its objective was to deliver support and technical assistance to the population affected by public catastrophes. After the earthquake of Caracas in July 29th 1967, the Unified Medical Command – *Comando Unificado Médico Asistencial* was integrated by national public health institutions and Civil Defense to provide assistance to the victims. The earthquake of 1967 left a death toll of 240 people and around 80,000 affected. As a result, the government approved a series of legal documents aimed to address specific damages caused by the earthquake in Caracas, such as the “Law of special measures to attend the victims of the earthquake of 1967”, this and other laws became inactive through time.^{7, 60, 62}

Regarding financing for disaster relief, on June 16th 1969 through the Presidential Decree N° 96 the Social Solidarity Fund – *Fondo de Solidaridad Social* was constituted and its goal was to prevent and restore the damages caused by natural catastrophes in the community.⁶¹

Consequently, in September 1971, Presidential Decree N° 702 orders the creation of the National Commission of Civil Defense. This new organism was created with the mission of planning and coordinating the activities to prevent, mitigate and restore the losses left by public disasters of any origin and at the same time to provide assistance to the affected population.⁶² Similarly, in 1972, thanks to a series of initiatives were emerging from the government, the Venezuelan Foundation of Seismologic Research – *Fundación Venezolana de Investigaciones Sismológicas* (FUNVISIS) was created with the mission of executing and promoting seismological research. FUNVISIS was established through decree N° 1.053, published in Official Gazette N° 29.864 and it is still operating currently.⁶³

Related to the integration of different institutions to the Civil Defense, in June 1975 the Ministry of Defense offers support from the Venezuelan Army during emergencies triggered by natural hazards. In August 1977 the National Commission of Civil Defense, created 6 years before, is redesigned and goes under the command of the Ministry of Internal Affairs and other ministries, given the great importance of this institutions in the

public safety and driven by the lessons learned through the experiences of other countries that had suffered the impact of seismic events, armed conflicts or epidemics, putting entire populations at risk.⁶²

Also in August 1979, the National Commission of Civil Defense through Presidential Decree N° 231, becomes part of the National Council of Security and Defense, which is the institution in charge of Public Management in the sense of coordinating the action of the institutions responsible for security.⁶¹ To this point, the Civil Defense, was the main institution in the field of disaster management in Venezuela and it was a branch of the security and defense system, which probably limited its scope of action.

The issues regarding disaster management during the eighties and nineties, were regulated separately and the distribution of duties among the different institutions were overlapping in some cases. Some regulations granted coordination roles to more than one institution and this situation generated confusion, doubling the efforts and misusing resources.⁶⁰

A crucial point in the field of legislation in disaster management in Venezuela, was the approval of the Bolivarian Constitution in December 1999. Among other important changes, the constitution contemplated the role of the State regarding disaster management, the leading role of the community in disaster risk reduction and the transformation of Civil Defense into the National Direction for Civil Protection and Disaster Management – “*Dirección Nacional de Protección Civil y Administración de Desastres*” (DNPCAD).

Concerning public security, the 1999 Constitution through article 55, entitles the citizens to the fundamental right to be protected from any hazard, vulnerability or risk, by the public security institutions specified in article 332: National Police Force, Scientific and Criminal Investigation Force, the Firemen and Emergency Management Department and the National Direction for Civil Protection and Disaster Management. In the same way, article 55 dictates the right and duty of the population to participate in their own protection and in prevention and security programs.⁶⁴

According to article 332, the two institutions responsible for disaster management are the Firemen and Emergency Management Department and the National Direction for Civil Protection and Disaster Management. Similarly, emergency and risk management is linked to sustainable development as it is contemplated in article 128: “the State will develop policies of organization of the territory, addressing the ecologic, demographic,

social, environmental, economic, cultural and political realities of each region, in accordance with the sustainable development premise and with participation of the population...”⁶⁴

Accordingly, the Law of the National Organization of Civil Protection and Disaster Management – *Ley de la Organización Nacional de Protección Civil y Administración de Desastres* was published in Official Gazette N° 5.557 on November 13th 2001. The objective of the law is to regulate the organization, competence, integration, coordination and operations of DNPCAD in the national, regional and local level. In this legal document it is specified the role of DNPCAD in planning and implementing policies to prepare in case of disasters, promote compliance to regulations for disaster risk reduction among different institutions, design training programs to prepare and promote the participation of the community in cases of emergencies and disasters among other regulations. DNPCAD is responsible for the implementation of the national policy for disaster management in Venezuela.⁶⁵

Finally, the Law of Integral Management of Socio-Natural and Technological Risk - *Ley de Gestión Integral de Riesgos Socionaturales y Tecnológicos* issued through Official Gazzete N° 39.095 on January 9th 2009, approved by the National Assembly. The objective of the aforementioned law is to shape and regulate the integral management of socio-natural and technological risk and establish the guide principles to execute the competences of the public authority at a national, regional and local level. This law includes the terms prevention, mitigation, risk reduction, rehabilitation and reconstruction associated to the environmental, social, economic and cultural realities of the population. One of the most relevant features of the Law of Integral Management of Socio-Natural and Technological Risk is the inclusion of “socio-natural” risk, which is defined as the potential hazard associated to physical events which intensity and recurrence is connected to environmental degradation or human intervention in natural ecosystems. This legislation is also related to the process of sustainable development of the nation.⁶⁶

| Venezuela | | |
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| Year | Legislation | Contents |
| 1936 | Official Gazette N° 18.913 Law of First Aid Kits – <i>Ley de Botiquines de Emergencia</i> | - Instructions to have a first aid kit adequately equipped in every public transportation unit and all public places to be used in case of a calamity. |

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| 1969 | Presidential Decree N° 96 To create the Social Solidarity Fund - <i>Fondo de Solidaridad Social</i> | - Fund created to prevent and restore damages caused by natural disasters. |
| 1971 | Presidential Decree N° 702 To create the National Commission of Civil Defense | - Institution in charge of planning and coordinating the activities to prevent, mitigate and restore the losses left by public disasters. |
| 1999 | Bolivarian Constitution of Venezuela 1999 Articles 55 and 332 | - Definition of the role of the State in disaster management to protect the population. - Creates the National Direction for Civil Protection and Disaster Management – <i>Dirección Nacional de Protección Civil y Administración de Desastres</i> . |
| 2001 | Official Gazette N° 5.557 Law of the National Organization of Civil Protection and Disaster Management – <i>Ley de la Organización Nacional de Protección Civil y Administración de Desastres</i> | - Defines the operation of Civil Protection at the national, regional and local level |
| 2009 | Official Gazette N° 39.095 Law of Integral Management of Socio-Natural and Technological Risk - <i>Ley de Gestión Integral de Riesgos Socionaturales y Tecnológicos</i> | - Regulations for the integral management of natural and technological risks, focusing on protecting the environment and relating to the process of sustainable development |

Table 4: Advancements in legislations for disaster management over the years in Venezuela.

DISCUSSION

As it has been observed through history of disaster management, measures and strategies have been implemented after severe catastrophic events, such was the case of the measures taken by the United Nations General Assembly in the 1960s.⁹ This trend, has been followed in certain occasions by the countries we have analyzed in this research study, where we have observed legal measures taken by the authorities after severe disasters.

Several examples can be mentioned regarding the implementation of measures for disaster management after severe catastrophes:

- Chile: earthquake of Valdivia in 1960 and Law N° 16.282 of Permanent dispositions for seismic cases and catastrophes in 1965.

- Colombia: a series of landslides and floods, besides the earthquake of Popayán were followed by Decree 1547 to create the National Fund for Calamities in 1984.
- Peru: earthquake of Ancash in 1970 and the subsequent Decree-Law N° 19338 Law of the Civil Defense National System.
- Venezuela: the earthquake of Caracas in 1967 followed by Presidential Decree N° 702 to create the National Commission of Civil Defense.

Tables 1-4 contain a summary the important steps in the evolution of disaster management laws in Chile, Colombia, Peru and Venezuela. Highlighting the importance of the decade from 1965 – 1975 as start point of the country policies towards the attention to disasters.

As it can be observed in the tables above, the decade from 1965 – 1975 also brought the concept of Civil Defense to this for countries in an official manner, either creating Civil Defense organizations or defining roles of already existing institutions to carry out the duties concerning the defense of the population against hazards, generally from natural origin. Even though in 1936 the Venezuelan government released a law to provide public places with first aid kits in case of catastrophe, it was not but until 1969 that they created a fund to restore the damages caused by natural hazards. Additionally, it was not possible to find any documents related to disaster management in Venezuela from 1971 to 1999.

Another similarity that can be seen in the evolution of disaster management from a legal point of view in the four countries included in this study, is the emphasis on decentralize the duties to achieve disaster risk reduction effectively. In some countries such as Chile, Colombia and Peru the matter of decentralization of duties was addressed in the early 1990s, while in Venezuela this process came later, in the early 2000s.

Consequently, Chile, Colombia and Peru have developed different plans at the national level to manage disasters since the 1970s, with different modifications over the years. In the constitutional level, Peru and Venezuela included the topic of disaster management in the Political Constitution of Peru in 1993 and the Bolivarian Constitution in 1999 respectively.

The most recent legal development in the disaster field, amongst the countries included in this study, was made in Colombia in 2016, by a Presidential Decree commanding the implementation of the National Plan of Disaster Management. Similarly, Colombia and Peru are the countries with the highest number of updates in disaster legislations in the last decade.

Furthermore, the terminology found in the majority of legislations, decrees, strategies and national plans for disaster management in Chile, Colombia, Venezuela and Peru was similar. Most of all, after the International Decade for Natural Disaster Reduction, which produced a significant difference in the disaster management approach worldwide.

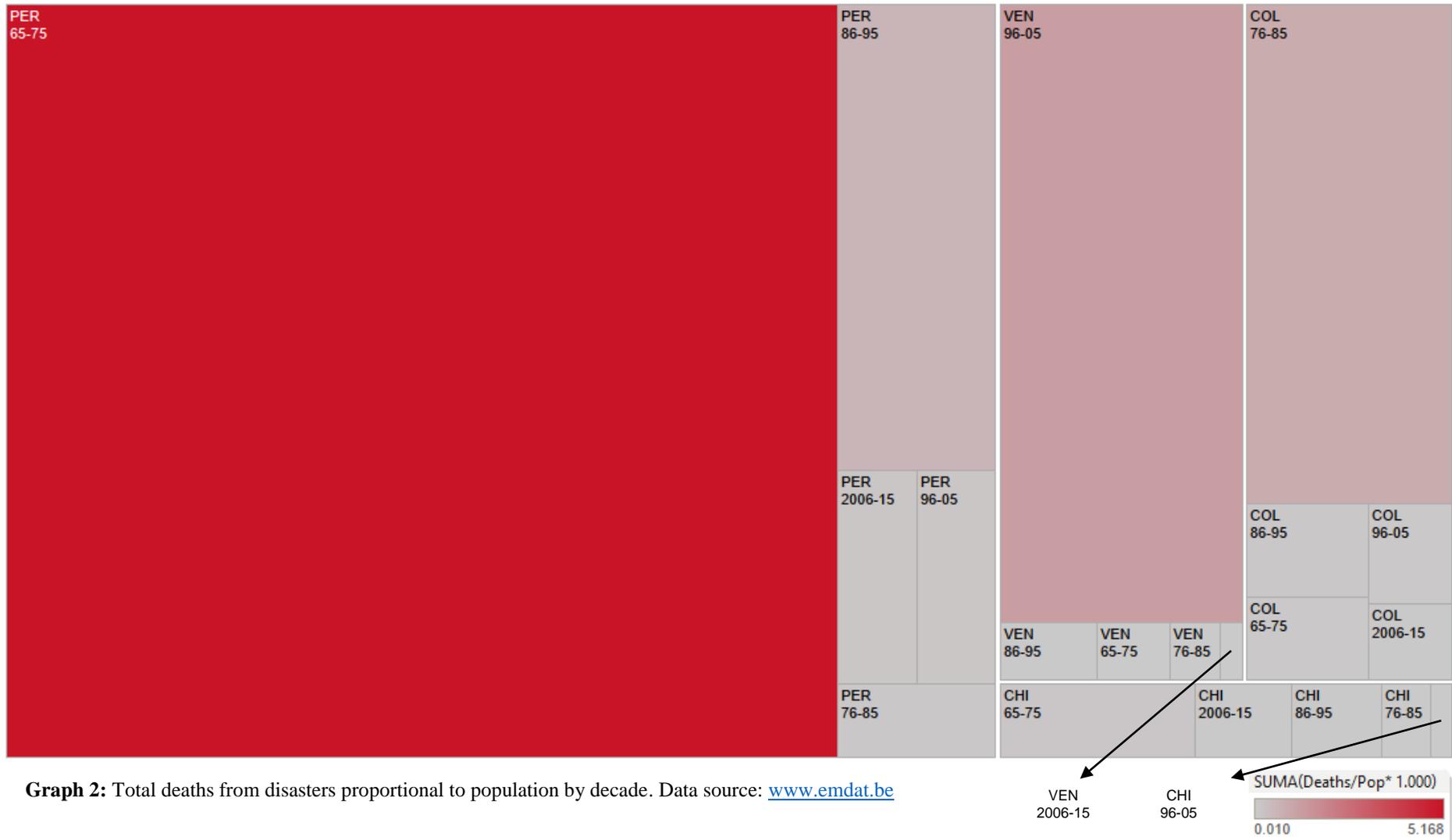
Considering the evident influence of catastrophic events on disaster management legislations that governments implement, and the increase in disaster reports over the years, thanks to the growing awareness around the globe, it becomes relevant to observe the figures of disaster reports over the decades (Graph 1), in this specific case we focus on Chile, Colombia, Peru and Venezuela.

On the other hand, Graph 2, displayed below, shows the total number of deaths left by disasters since 1965 to 2015 divided by the population of the country in the mid-term of each decade. We can observe that Peru clearly registered the highest number of during the decade from 1965 – 1975, likewise, Chile had the highest amount of deaths during the same decade. The earthquake of Ancash in 1970 probably is one of the reasons for the high death toll we observe in Peru 1965 – 1975.

Furthermore, in Venezuela the highest number of deaths was registered during the decade from 1996 – 2005. It is relevant to highlight the Vargas landslides in 1999, being the deadliest disaster in Venezuelan history. In Colombia the highest death toll was registered during 1976 – 1985, having occurred the volcanic eruption of Nevado del Ruiz during November 1985.

Overall, there is an evident decrease in the number of deaths left by disasters in the last twenty years in Chile, Colombia and Peru. Venezuela showed the lowest number of deaths during the last decade having a drastic change in comparison to the decade from 1996-2005.

Finally, it is important to remark that in this study we did not analyzed compliance to the legislations, health and social impact of the laws nor performance towards the national plans of disaster management. We find relevant to carry out studies that focus on the aforementioned factors in relation to legislations for disaster management.



Graph 2: Total deaths from disasters proportional to population by decade. Data source: www.emdat.be

CONCLUSIONS AND RECOMMENDATIONS

In summary, the field of disaster management has expanded its scope of action significantly since the 1960s. Disaster risk reduction has experienced a transformation, from being a merely technical discipline with lesser attention in the international community, to become a global movement widely involved with sustainable development.¹⁰

The United Nations General Assembly has played a relevant role in the development of policies to reduce disaster risk globally. The progress made by the UN organizations in the management of catastrophes is made evident and explained chronologically in the background of this study. In addition, the implementation of initiatives such as the International Decade for Natural Disaster Reduction, the International Strategy for Disaster Reduction, The Hyogo Framework for Action 2005 - 2015 and the Sendai Framework for Disaster Risk Reduction 2015-2030 represent a great influence and reference for the consolidation of preparedness, awareness, the formation of resilient communities and the implementation of better policies and legislations for disaster risk reduction.

In the South American context, the influence of the aforementioned initiatives has been reflected in actions taken to overcome the challenges imposed by disasters of any kind. The progress made in disaster management through legislations, laws, policies and strategies in Chile, Colombia, Peru and Venezuela have been described, evidencing the growing consciousness towards disaster risk reduction from 1930s up to the present day. The institutions in charge of disaster management started as voluntary bodies of aid to become well established official institutions.

Moreover, there have been differences in the implementation of certain legislations in the group of countries included in this study, the year of issue and the scope of action. Nevertheless, the terminology, the objectives and the means to achieve them is, in certain ways, similar for all of them, evidencing the social similarities that Chile, Colombia, Peru and Venezuela hold when it comes to disaster management, even though the outcomes could be different for this nations.

We recommend to develop studies to analyze impact of the legislations, policies, laws, strategies and plans for disaster management, globally and in the four countries included in this analysis; related to health, human and economic losses, affected population and

compliance to the law, in order to achieve a better understanding of the role of disaster management and risk reduction, both in the South American context and the world.

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