



Analysis of legislation related to disaster risk reduction in Brazil

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About this report

This report was commissioned by the IFRC and prepared by Karen Costa, legal consultant. It is one of several case studies the IFRC is undertaking to learn about how legislation can support (or impede) disaster risk reduction, particularly at the community level. For more information about the project and various case studies as they become available, please visit our website at <http://www.ifrc.org/idrl>.

About the IDRL Programme

The IFRC's "International Disaster Response Laws, Rules and Principles" (IDRL) Programme seeks to reduce human vulnerability by promoting legal preparedness for disasters. It works in three areas: (1) collaborating with National Red Cross and Red Crescent Societies and other partners to offer technical assistance to governments on disaster law issues; (2) building the capacity of National Societies and other stakeholders on disaster law; and (3) dissemination, advocacy and research.

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Executive summary

Brazil has in the recent past increased the number of initiatives on disaster risk reduction (DRR). This has been triggered especially by the recent episodes of serious disasters hitting the country, notably floods and landslides, for example, in 2008 in Santa Catarina and in 2011 in Rio de Janeiro. Such events resulted in thousands of dead and hundreds of thousands being made homeless, and gave rise to much debate on how the country can best cope with future disasters.

The legislative framework most directly addressing DRR in Brazil is found in its laws on civil defence, and this area of the law has in recent years been frequently amended, often to accommodate changes considered necessary so as to better respond to ongoing disasters. Be that as it may, legislation on the matter still needs further development and greater clarification, especially concerning the division of tasks to be undertaken at the three levels of government, and policy guidelines on how the system should operate in practice.

Another related legislative area which has recently addressed several DRR issues relates to legislation on urbanization, construction and land regulation, especially the recent adoption of the Statute of the City and the establishment of the Ministry of Cities. Both have so far had an important impact especially on disaster mitigation engineering interventions, intended specifically to contain slopes located at risk areas, which are often surrounded by the houses of poor families. Since natural disasters in Brazil affect most severely the vulnerable sector of the population, initiatives on urban planning addressing the constitutional right to adequate housing, together with legislation and decisive policy programs, seem to have had a positive impact on the reduction of disaster risk in the country.

Nevertheless, it seems much remains to be done, especially in regard to the identification of disaster risk areas throughout the country, the joint cooperation between all three governmental levels, and the allocation of resources according to clear criteria and towards those most in need. Community level work needs to be further strengthened, with a more direct involvement and empowerment of community members. It is interesting to note that international organizations do not seem to play a major role in relation to DRR activities in Brazil, the majority of actions being mostly undertaken at governmental level. Finally, it seems that although the official rhetoric proclaims the urge to follow international initiatives, such as the Hyogo Framework for Action, it seems that better coordination among different sections of the government still needs to be achieved, in order to include DRR concerns throughout governmental agendas, both in theory (for example, the need for them to be taken into account in the passing of new legislation, such as the new Forest Code), and also in practice (by different ministries, including the Ministry of Transports, which has to reconstruct infrastructure buildings destroyed by disasters – for example bridges - taking into account DRR aspects so as to avoid the need to do so again in the event of a new disaster).

Executive summary

Overall, it has been possible to identify several positive and encouraging initiatives on awareness raising, education and involvement of the community, especially on the education of children. Combined with structural measures aiming to mitigate risks, especially on hilly slums, it seems there are many positive features to be highlighted. Nevertheless, much still remains to be done, especially so as to translate official deeds into action at the community level, for the advantage of all.

Acknowledgements

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It would also like to thank all those who gave their time to speak with the consultant, many of whom also provided documents and additional information (all those consulted are listed in Annex 1). Especial thanks to the CEPED team of the Federal University of Santa Catarina, who in partnership with the municipality of Florianópolis and Ilhota arranged community visits to the Morro do Maciço (Morro da Penitenciária, with the collaboration of the local community association), and to the Vale do Baú (Braço do Baú, with the collaboration of the local organization ADARB).

This report was prepared by Karen Costa, legal consultant.

Abbreviations

ADARB	Association of Displaced and Affected of the Baús Region (Associação dos Desabrigados e Atingidos da Região dos Baús)
CEPED-UFSC	University Center for Studies and Research on Disasters – Federal University of Santa Catarina (Centro Universitário de Estudos e Pesquisas sobre Desastres – Universidade Federal de Santa Catarina)
CD-SC	Civil Defence of Santa Catarina (Defesa Civil de Santa Catarina)
COMDEC	Coordination Office of the Municipal Civil Defense (Coordenadoria Municipal de Defesa Civil)
CONDEC	National Council on Civil Defence (Conselho Nacional de Defesa Civil)
CONSEA	National Council for Food Security and Nutrition (Conselho Nacional de Segurança Alimentar e Nutricional)
CONSEG	Security Community Councils (Conselhos Comunitários de Segurança)
DRR	Disaster Risk Reduction (Redução do Risco de Desastres)
FGTS	Guarantee Fund for Time of Service (Fundo de Garantia do Tempo de Serviço)
FIOCRUZ	Oswaldo Cruz Foundation (Fundação Oswaldo Cruz)
FUNCAP	Special Fund for Public Calamities (Fundo Especial para Calamidades Públicas)
IBGE	Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística)
INPE	National Institute for Space Research (Instituto Nacional de Pesquisas Espaciais)
MCT	Ministry of Science and Technology (Ministério da Ciência e Tecnologia)
MDA	Ministry of Agrarian Development (Ministério do Desenvolvimento Agrário)
MNI	Ministry of National Integration (Ministério da Integração Nacional)
MoC	Ministry of Cities (Ministério das Cidades)
MoN	Ministry of Health (Ministério da Saúde)
MP	Member of the Parliament (Parlamentares – Deputados e Senadores)
MPE-SC	State/Province Prosecutorial Office – State/Province of Santa Catarina (Ministério Público Estadual de Santa Catarina)

Abbreviations

NSCD/SEDEC	National Secretariat of Civil Defence (Secretaria Nacional de Defesa Civil)
NUDEC	Civil Defence Community Group (Núcleo Comunitário de Defesa Civil)
PAC	Program to Speed-up Growth (Programa de Aceleração do Crescimento)
PMRR	Municipal Plan for Risk Reduction (Plano Municipal de Redução de Risco)
SEAF	Insurance of Family Farming (Seguro da Agricultura Familiar)
SINDEC	National Civil Defense System (Sistema Nacional de Defesa Civil)
TCU	Budget Auditing Authority (Tribunal de Contas da União)
ZEIS	Special Social Interest Zones (Zonas Especiais de Interesse Social)

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Chapter 1

Background

Background

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Background to the project

In 2005, states, development and humanitarian organizations, and other stakeholders adopted the Hyogo Framework for Action,¹ setting a series of priorities for global action to reduce the risk of disasters. The first of these priorities was to “ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation,” notably through the adoption of supportive legislation. Since then, a number of countries have adopted or begun to consider new laws, policies and institutional arrangements for disaster risk reduction (DRR). Yet, as of 2009, participants at the Second Global Platform on Disaster Risk Reduction concluded that there was still “a pressing need to build institutions, including legal frameworks, to sustain disaster risk reduction action as an ongoing concern,” and noted that “several countries stressed the need for technical assistance, to help grow their capacities.” While a great deal of information and resources have been developed to share best practices about DRR generally, specific information about what legislation can (and cannot) accomplish has remained limited.

In response, the International Federation of Red Cross and Red Crescent Societies (IFRC) is undertaking a series of case studies to examine the strengths and perceived gaps in the current laws of disaster-prone countries whose governments, National Societies and civil society organizations are active in the field of risk reduction. The Brazil case study presented in this report is part of this series.

The case studies focus in particular on how existing legislation can lead to concrete results at the community level, for example, through fostering community participation, supporting education, ensuring implementation of building codes and land management rules and facilitating the work of community-based institutions. The case studies are not designed to be exhaustive or prescriptive. Instead, through a brief period of research and consultations, they aim to illustrate some of the best practices and outstanding issues. This study reflects, as far as possible, the current state of affairs in relation to the country, especially in regard to relevant federal law. However, it is evident that due to the continental size of the country, its very different regions and the large number of municipalities (5565 in 2009²), the brief period and limited resources available for this study have allowed for only an indicative snapshot of what can be identified at the local level. Furthermore, it is also important to keep in mind that the mission took place in the early stage of the new federal government, President Dilma Rousseff having started her mandate at the beginning of 2011, and thus although the same political party remained in power at the federal level (the Labour party), several changes were still ongoing, especially in terms of the composition of the new government (personnel in ministries, etc.).

For the purposes of the current study, the term **disaster** corresponds to “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

¹ ‘Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Extract from the Final Report of the World Conference on Disaster Reduction)’, *World Conference on Disaster Reduction. 18-22 January 2005, Kobe, Hyogo, Japan* (Kobe, Hyogo, Japan: International Strategy for Disaster Reduction, United Nations, 2005).

² See IBGE, ‘Perfil dos Municípios Brasileiros 2009’. See <http://www.ibge.gov.br/home/estatistica/economia/perfilmunic/2009/default.shtm>, visited in 15.04.2011.

or society to cope using its own resources.”³ Furthermore, the study does not cover the following situations:

- armed conflict
- situations of generalized violence
- small-scale emergencies (such as traffic or workplace accidents), and
- contagious disease outbreaks (e.g. epidemics and pandemics)

The key research questions addressed in the current study can be summarised as follows:

- What are the most important laws, regulations, rules and policies of Brazil relevant to DRR (e.g. disaster management laws, building and land management codes, environmental protection rules, flood and fire management laws)?
- To what degree is the impact of these laws concretely felt at the community level?
- As currently implemented, do existing laws:
 - provide adequate incentives and disincentives toward reducing disaster risks?
 - encourage community information, education and participation in DRR?
 - promote community involvement in decision-making?
 - facilitate the work of community-based organizations?
- What are some best practices that might be shared with other countries?
- Are there any outstanding issues or gaps in the legal framework for DRR in Brazil, or in its implementation?

Methodology

The project period was a total of six weeks, including initial desk research on Brazil’s laws related to DRR, in-country consultations with relevant stakeholders, and report drafting. Given the short timeframe, it could not attempt to be a comprehensive study of the entire legal and institutional framework of relevance to DRR in Brazil, but rather an overview of the legal framework with some specific examples, focusing as much as possible on community level implementation. The primary legal research was mainly based on legislation in Portuguese (only very few texts are available in English) published on official websites. For federal legislation, the websites of the Civil Defence⁴ and of the President of the Republic⁵ were particularly helpful for texts covering DRR and further issues, respectively. Also consulted were recent national strategy and policy documents, including, when available, DRR project reports, as well as international reports and risk analyses concerning DRR in Brazil as a means to place the legal analysis in the context of DRR initiatives and disaster management in the country.

The project researcher, Karen Costa, conducted the mission to Brazil from 28 March – 08 April 2011, with the goal of carrying out in-country consultations, which were invaluable in identifying which elements of the legal framework were particularly pertinent, as well as providing information on the practical work of institutional structures, on implementation of the laws and regulations, and on proposals for reform. She met with government officials at the national, regional and local levels, UN agencies, NGOs, civil society and community representatives. It was neither possible to meet with all major actors during such a short visit, nor to visit several different regions of the country,

³ The definition of disaster used in the current study reflects the definition adopted in the International Strategy for Disaster Reduction

⁴ <http://www.defesacivil.gov.br/legislacao/index.asp>, visited on 10.04.2011.

⁵ <http://www4.planalto.gov.br/legislacao>, visited on 10.04.2011.

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and it should therefore be understood that the absence of an institution or of a particular region from this list may simply mean either that their representatives were not available for meeting at the relevant time, or that it was not possible to accommodate all visits in such a short mission (nevertheless, efforts were made to contact key stakeholders on the subject not based in the places where the mission took place for consultation via email and/or telephone). The meetings were conducted as discussions around disaster risks, DRR practices, and legal issues relevant to each person or group, rather than as structured interviews. Nevertheless, the reference document containing the basis for the project and the detailed research questions was electronically sent to the relevant individual(s) at the institution to be interviewed beforehand, and the later discussion aimed to address the main features contained in that document.⁶ Discussions and statements made during such meetings have not been directly quoted, but where such conversation was the main source about a legal or relevant factual issue concerning DRR, it has been referenced accordingly. The list of meetings and community visits is provided in Annex 1.

In terms of Brazil's governing bodies, meetings were held with officials in the key national ministries/departments relevant to DRR as well as with representatives of key international organisations (notably UN agencies), the majority of them based in Brasília. Moreover, the mission continued towards the south of the country, meeting with officials of the regional government in the province of Santa Catarina, and also with officials at local level in the municipality of Florianópolis. The choice of places for the mission was made taking into account previous consultation with key stakeholders working on DRR (especially in the Red Cross/Red Crescent system, as well as with members of the Ministry of National Integration, notably the National Secretary of Civil Defence, the governmental institution primarily in charge of DRR in Brazil). The places visited were recommended for the mission due to their significant ongoing DRR efforts, as well as the fact that they have in the recent past dealt with natural disasters, especially floods and mudslides.⁷

It is worth stating that findings regarding the province of Santa Catarina do not necessarily reflect the picture for Brazil as a whole, especially taking into account that in the national context this province typifies a region widely considered as well-developed and with a general good level of education.⁸ Historically, at the end of the 19th century the region was populated by Europeans (mostly Germans and Italians), who were invited by the federal administration to emigrate to Brazil to cultivate the land, and who settled in the subtropical south of Brazil occupying mainly riverbeds and the backs of valleys, reputed as the most fertile land for agriculture. The generations that followed largely remained in the same areas, and with among other factors the growth

⁶ Document in Portuguese containing background of the project, as well as list with detailed research questions.

⁷ Moreover, the province of Santa Catarina was hit by the Catarina tropical cyclone in 2004, which caused US\$ 350-425 million damage, killing four people and injuring 518 others. See 2009 Global Assessment Report on Disaster Risk Reduction, page 29. Available at http://www.preventionweb.net/english/hyogo/gar/report/documents/GAR_Chapter_2_2009_eng.pdf, visited on 10 April 2011.

⁸ According to UNDP data of 2000, the province of Santa Catarina ranks in second place on Brazil's HDI (Human Development Index), amounting to 0,822 – and it is hence considered a region with high human development (above 0,8). Life expectancy in the province in the year 2000 was 73,7 years. Regarding education, in 2000 the percentage of children between 7-14 years attending school was 96.7 per cent. Regarding further social data, in 2009 the parcel of the population considered poor amounted to 16.2 per cent of the total of the population in the province. See UNDP, 'Atlas do Desenvolvimento Humano no Brasil', available at <http://www.pnud.org.br/atlas/instalacao/index.php>, visited 14 April 2011.

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of the population and the occupation of such fragile areas the region became over the years increasingly prone to disasters.

Although contact was sought via the International Federation of the Red Cross with the Brazilian Red Cross before the undertaking of the mission in the country, reply came only during the mission, and due to their office being located in Rio de Janeiro, it was not possible for the consultant to personally meet with representatives.

In relation to communities, two visits were undertaken in the province of Santa Catarina. The first of them was to a community located in the municipality of Ilhota, namely that of Vale do Baú, a rural middle-class community located in a sparsely populated area about 120 km from the capital of the province (Florianópolis), and which was heavily affected by floods and landslides in 2008. The other community visited was in the municipality of Florianópolis, namely the urban poor community of Morro da Penitenciária (Penitentiary Hill), part of the Maciço do Morro da Cruz, a complex of hills located in that town, in which communities have moved, built and lived for more than 50 years, and which today is an overcrowded area that has in recent years experienced recurrent floods, mud- and landslides.

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Chapter 2

Overview of the disaster risk profile of Brazil

Overview of the disaster risk profile of Brazil

Brazil is the largest country in South America with an area of 8.55 million sq km. It is contiguous with all continental South American countries except Ecuador and Chile. Its population amounts to 195.4 million, with average life expectancies of 70 for men and 77 for women.⁹

Brazil is one of the fastest growing emerging economies in the world. With large and growing agricultural, mining, manufacturing and service sectors, Brazil's economy ranks highest among South American countries, and it has also achieved a strong position in the global economy.

Brazil is made up of 26 states and the Federal District, and is divided into five geographical regions: North, Northeast, Midwest, Southeast and South. The North Region comprises about 45 per cent of total Brazilian land area (including the Amazon forest), but accounts for only 7 per cent of the total population of the country.¹⁰ The Northeast Region represents 18 per cent of the total area of the country, and the region is classified as semi-arid, with coastal areas hot and humid, and more elevated inland areas very hot and dry.¹¹ The Midwest Region takes 18 per cent of the national territory, and is where Brasília, the capital of the country, is located.¹² This region is inhabited by about 6 per cent of the Brazilian population. The Southeast Region is home to the biggest share of the country's population, almost 65 million people, and it comprises about 10 per cent of Brazilian territory, including large cities, notably São Paulo and Rio de Janeiro.¹³ The South region is the smallest, with about 7 per cent of Brazilian territory, and it is inhabited by 22 million Brazilians.¹⁴

Natural disasters in Brazil

According to data from EM-DAT (2007), there were 150 records of disaster during the period 1900-2006 in Brazil. Of the total, 84 per cent have occurred since the late 1970s, showing a considerable increase in the number of disasters in recent decades. As a consequence, 8,183 fatalities were counted, together with losses of approximately US\$ 10 billion.¹⁵

The most frequent types of disaster were floods (59 per cent of the records), gradual and sudden, followed by landslides (14 per cent). Most disasters in Brazil (more than 80 per cent) were associated with severe atmospheric instability, which is responsible for triggering floods, tornadoes, hail and landslides. With the exception of gradual floods, these are sudden and violent phenomena that cause large mortality and destruction, because there is no time for people to seek shelter or to save any of their belongings in their homes.¹⁶

⁹ http://news.bbc.co.uk/2/hi/europe/country_profiles/1227110.stm#overview, visited 15 April 2011.

¹⁰ It is composed of the States of Acre, Amapá, Amazonas, Pará, Rondônia, Roraima and Tocantins.

¹¹ The Northeast region comprises the states of Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Bahia.

¹² The states of Goiás, Mato Grosso and Mato Grosso do Sul form the Midwest region

¹³ The Southeast region is composed of the States of Espírito Santo, Minas Gerais, Rio de Janeiro and São Paulo.

¹⁴ The South region comprises the States of Paraná, Santa Catarina and Rio Grande do Sul. See <http://www.brasil.gov.br/sobre/brazil/brazilian-state/territory-1>, visited 15 April 2011.

¹⁵ See <http://www.inpe.br/crs/geodesastres/nobrasil.php>, visited 15 April 2011.

¹⁶ See <http://www.inpe.br/crs/geodesastres/nobrasil.php>, visited 15 April 2011.

Overview of the disaster risk profile of Brazil

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Table 1: Impacts of natural disasters in Brazil (1900-2011)

		# of Events	Killed	Total Affected	Damage (000 US\$)
Drought	Drought	16	20	47812000	4723100
Earthquake (seismic activity)	Earthquake (ground shaking)	2	2	23286	5000
Epidemic	Unspecified	2	303	235	-
	Bacterial Infectious Diseases	5	1696	45893	-
	Viral Infectious Diseases	8	218	994095	-
Extreme temperature	Cold wave	5	154	600	1075000
	Heat wave	3	201	-	-
Flood	Unspecified	51	4016	8155931	2887814
	Flash flood	7	591	245331	175770
	General flood	49	2029	9001894	4186170
Insect infestation	Unspecified	1	-	2000	-
Mass movement wet	Landslide	23	1656	4237484	86027
Storm	Unspecified	7	277	50076	-
	Extratropical cyclone (winter storm)	1	3	1600	-
	Local storm	8	66	11356	91000
	Tropical cyclone	1	4	150060	350000
Wildfire	Forest fire	1	-	-	-
	Scrub/grass-land fire	2	1	12000	36000

With regard to spatial distribution, more than 60 per cent of disasters occurred in the South-East and South Regions. In Brazil, this distribution is more associated with geo-environmental than with the socioeconomic characteristics of the regions affected, since slum areas, pockets of poverty and a lack of urban planning are present in most

Brazilian cities. In these two particular regions, the atmospheric instability is frequent due to the passage of cold fronts in winter, the occurrence of the Mesoscale Convective Complex in spring and the formation of convective systems in the summer, which trigger the rains which are concentrated in this season.¹⁷ The Northeastern region was hit by 32 per cent disasters, with a long history of drought but in the recent past also hit by floods.

The current report will provide only a brief outline of the potential disaster risks and vulnerabilities Brazil faces in order to set the background context in which its DRR legislation developed. However, one has to note that ongoing efforts by the Federal Government aim to undertake a disaster mapping exercise covering the entire country, which so far has not been carried out for the country as a whole.¹⁸

A recent consultation of the EM-DAT database suggests that the disaster profile has not significantly changed, as seen from the graph depicted in this section.¹⁹ In Brazil droughts cause the greatest number of affected people, largely because they tend to last longer than other disasters. Nevertheless, floods are the most common disaster, and cause more deaths and economic losses, because they are much more numerous and affect a greater number of locations.²⁰

Floods and landslides

These are the main risk factors causing natural disaster in urban areas of Brazil, landslides being a recurrent phenomenon hitting about 150 Brazilian municipalities each year, and often resulting in loss of human life. Among the most vulnerable municipalities are those located in the states of São Paulo, Rio de Janeiro, Minas Gerais, Pernambuco, Santa Catarina, Alagoas, Bahia and Espírito Santo.²¹ The intensity of rainfall is a key factor in floods and landslides in Brazil, as is the vulnerability of the many illegal settlements and highly populated slum areas, generally erected without any technical advice, combined with cutting of trees, the deposition of garbage, cutting of land sections and construction over unstable land-filled areas, the lack of sewage systems and rainwater draining systems.²²

In terms of geographical distribution and considering the geological, geomorphologic and meteorological characteristics of Brazil, it is possible to highlight, in the South and Southeast Regions, the Serra do Mar and Serra da Mantiqueira mountainous formations as areas prone to landslides. Moreover, in the Midwest Region, high areas on the central highlands can further be identified as areas with a greater tendency for the occurrence

¹⁷ See <http://www.inpe.br/crs/geodesastres/nobrasil.php>, visited 15 April 2011.

¹⁸ According to conversation with representatives of the National Secretary on Civil Defence (NSCD/SEDEC).

¹⁹ See <http://www.emdat.be/result-country-profile>, created on: Apr-15-2011. - Data version: v12.07, Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium".

²⁰ L. Nunes, Mudanças climáticas, extremos atmosféricos e padrões de risco a desastres hidrometeorológicos, in D. Hogan and E. Marandola Jr. (orgs.) 'População e mudança climática: dimensões humanas das mudanças ambientais globais', Campinas: Núcleo de Estudos de População (NEPO)/Unicamp; Brasília: UNFPA, 2009, at 65.

²¹ See http://www.cidades.gov.br/secretarias-nacionais/programas-urbanos/biblioteca/prevencao-de-riscos/materiais-de-capacitacao/capacitacao-de-equipes-municipais/Curso_UFPE_apostila.pdf, at 26, visited 16 April 2011.

²² See http://www.cidades.gov.br/secretarias-nacionais/programas-urbanos/biblioteca/prevencao-de-riscos/materiais-de-capacitacao/capacitacao-de-equipes-municipais/Curso_UFPE_apostila.pdf, at 27, visited 16 April 2011.

Overview of the disaster risk profile of Brazil

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of landslides.²³ In northern Brazil, floods often occur during El Niño events, for example, in January 2004, when floods affecting this region began with intense rainfall and were said to have destroyed more than 4,000 homes, disproportionately affecting the poorest Brazilians whose homes often line the river banks of low-lying areas.²⁴

Drought

The northeast of Brazil, in particular, has been dealing with intermittent drought for centuries; the first recorded drought in Ceará was reported by the Jesuits in the late 1500s. Severe droughts in the early 1980s affected 18 million people and cost approximately US\$1.8bn in emergency programmes. Since 1983, the region has been in the grip of long-term drought. This has caused a 16 per cent decline in agricultural production, significantly affecting smallholders. Understandably, water scarcity and vulnerability to drought have subsequently been a high priority on political agendas since the 1990s.²⁵

Vulnerability

Brazil is a middle-income country ranking 73rd in the world according to its UN's Human Development Index. It is the largest economy in Latin America and the tenth largest economy in the world. However, the nation's wealth is unevenly distributed, with the richest 2 million inhabitants holding the same proportion of household income as the poorest 80 million. Some 30.3 per cent of the population is considered poor, and 11.5 per cent are extremely poor.²⁶

This social difference is reflected in the way and levels how natural disasters affect the population. Studies suggest that the poor sector of the population is much more likely to be affected by disasters than wealthier sectors,²⁷ not least because of the fact that low income families are much more likely to live in disaster-prone areas.

In considering the socio-economic characteristics and the development model prevalent in the country, metropolitan regions of cities like São Paulo, Rio de Janeiro, Belo Horizonte and Recife represent areas with high potential and records of occurrence of floods and landslides. Taking further into account that the majority of the population lives in cities and that a great number of families is concentrated in highly populated and often poor areas, the likelihood of the poor being affected is far greater.²⁸

Another aspect worth mentioning is that the general popular belief among Brazilians is that the country is rather free from disasters, since there is no great occurrence of

²³ See http://www.inpe.br/crs/geodesastres/imagens/livros/Vulnerabilidade_ambiental_desastres_naturais_ou_fenomenos_induzidos_MMA_2007.pdf, at 77.

²⁴ See http://www.preventionweb.net/files/7860_Separatestreamsweb1.pdf, visited on 16 April 2011.

²⁵ See http://www.preventionweb.net/files/7860_Separatestreamsweb1.pdf, visited on 16 April 2011.

²⁶ See http://www.preventionweb.net/files/7860_Separatestreamsweb1.pdf, at 31, visited on 16 April 2011.

²⁷ L. Nunes, Mudanças climáticas, extremos atmosféricos e padrões de risco a desastres hidrometeorológicos, in D. Hogan and E. Marandola Jr. (orgs.) 'População e mudança climática: dimensões humanas das mudanças ambientais globais', Campinas: Núcleo de Estudos de População (NEPO)/Unicamp; Brasília: UNFPA, 2009, at 66-67.

²⁸ See media interview with the Minister for Science and Technology, Mr. Aloizio Mercadante, under <http://blog.planalto.gov.br/categoria/destaques/bom-dia-ministro-destaques/page/2/>, visited on 15 April 2011.

earthquakes, tsunamis, or volcano eruptions.²⁹ Thus, it is no surprise that much of what is currently being done in the country regarding DRR aims to raise the level of public information and perception about disasters, as will be seen later on in the report.

²⁹ See http://www.inpe.br/crs/geodesastres/imagens/livros/Vulnerabilidade_ambiental_desastres_naturais_ou_fenomenos_induzidos_MMA_2007.pdf

Analysis of legislation related to disaster risk reduction in Brazil

Chapter 3

Legislative framework for disaster risk reduction

Legislative and governance structure

Brazil is a presidential republic. The presidential term lasts four years, with the possibility of one re-election. The promulgation of the 1988 Constitution marked the early democratic consolidation after years of military dictatorship. One of the key features of the 1988 Constitution is that it provided greater regional autonomy, especially for municipalities. Inspired by the US model of federalism, the new Constitution defined as autonomous the political and administrative entities known as: the Union, the states/provinces (and the Federal District) and the municipalities.³⁰ Legislative competence is assigned in the Constitution to different entities according to subject, some of them falling exclusively within the competence of a particular entity, while others are within the joint competence of all three entities (though provincial and municipal legislation cannot go against federal legislation).

This model implies close cooperation among different legal entities at the three levels of state organization. Nationwide public policies are often conceptualized by the Union and implemented with the general support of the provinces (and the Federal District), while the effective implementation at local level heavily relies on action taken by municipalities.³¹ This is the case in relation to programs related to DRR, as will be seen later in this report. The main advantage of the model seems to be that all entities have to work closely together, in order for large-scale programs and policies to successfully take place. However, taking into account that Brazil is divided into 27 states/provinces (including the Federal District), which are subdivided into 5,565 municipalities, coordination and cooperation among entities represents a real practical challenge.

Another issue that may amount to a shortcoming is the distribution of the country's budget; according to the 1988 Constitution, the greatest part of it is assigned to the Union, whereas smaller parcels are allocated to provinces and even smaller parcels to municipalities. Thus, in order to increase their financial backing for concrete action, the latter entities have to make requests to the Union for the assignment of funds in the framework of specific projects and policies. Also, as a general rule, the Union may not impose policies or actions on other levels of government, rather, sub-national governmental bodies normally have to demonstrate interest in joining policies conceptualized by the Union, sometimes through proposals for concrete actions and projects which may be selected by the Union and then implemented by other entities once funds for such purposes are allocated and transferred to them. A further related corollary of the federal model is that, when facing difficulties, municipalities have to exhaust their capacity in order to ask for support, generally having to first request support from provinces (and/or the Federal District), and, if the need remains, request further support from the Union (this is the case in relation to sending the military in support of municipal efforts in coping with national disasters, for example).

³⁰ See Brazilian Constitution of 1998, article 18.

³¹ See 'Gestão e Mapeamento de Riscos Socioambientais: Curso de Capacitação', C. Carvalho, R. Coutinho and T. Galvão (orgs.), Brasília: Ministério das Cidades; Universidade Federal de Pernambuco – UFPE, 2008, http://www.cidades.gov.br/secretarias-nacionais/programas-urbanos/biblioteca/prevencao-de-riscos/materiais-de-capacitacao/capacitacao-de-equipes-municipais/Curso_UFPE_apostila.pdf, at 27, visited 16 April 2011.

National disaster management and risk reduction law and policy

The policy and institutional framework regarding DRR

Although the reduction of natural disasters is indirectly associated with various public policies developed especially at the federal level in areas such as health, housing, sanitation, water resources, education and environment, in Brazil the organs most widely recognized as directly associated with DRR are the Ministry of National Integration and the Ministry of Cities.³²

The **Ministry of National Integration (MNI)**, notably through its **National Secretariat of Civil Defence (NSCD)** is the main body directly assigned the tasks relating to DRR, being the overall coordinator of the National Civil Defence System. The Civil Defence apparatus in Brazil was created during the Second World War in 1942 under the denomination of “Passive Defence Service Anti-Aircraft,” amended in 1943 to the “Civil Defence Service” and disbanded in 1946. As a result of a great flood in the southeast in 1966, a working group was set up, and in the following year it led to the assignment of responsibility to the Ministry of the Interior to help populations affected by disasters in the whole country. Brazil’s National Civil Defense System (SINDEC) was organized in 1988, reorganized in 1993, updated through Decree No. 5,76 of 17 February 2005, and amended by later legislation. The current main law in the area is Law 12,340, of 1 December 2010, and the Decree 7,257, of 4 August 2010, both of which are currently being reviewed as indicated later on in this study. Tasks assigned to the National Civil Defence comprehend “the set of preventive actions, of relief, assistance and recovery aimed at preventing disasters, minimizing their impacts on the population and restoring social normality.”³³

The **Ministry of Cities (MoC)** was created in 2003, having, as one of its flagship initiatives, the “Action to Support the Prevention and Eradication of Risks in Settlements,” within the framework of the “Urbanization, Regularization and Integration of Precarious Settlements” program. It offers support especially to municipalities through the articulation of a set of actions aimed at reducing risk in urban areas. In order to receive support from the Ministry of Cities, municipalities have to draft projects concerned with the urbanization of slums and regularization of precarious settlements, namely areas particularly vulnerable to disaster occurrence associated with landslides and floods.³⁴ Among the support activities conducted by the MoC are:

- training of municipal technicians, especially on risk identification, assessment, prevention and management (training is held either in loco in various localities throughout the country or via distance learning courses, with online sources and platform);³⁵
- financial support for municipalities to produce their own Municipal Plan on Risk Reduction, which includes risk diagnosis and has to be compatible with Federal Programs on slum upgrading and land regularization (providing land titles to poor families occupying certain areas);³⁶ and

³² Idem, at 21.

³³ See Law 12.340, of 1 December 2010, article 1.

³⁴ See ‘Gestão e Mapeamento de Riscos Socioambientais: Curso de Capacitação’, C. Carvalho, R. Coutinho and T. Galvão (orgs.), Brasília: Ministério das Cidades; Universidade Federal de Pernambuco – UFPE, 2008, http://www.cidades.gov.br/secretarias-nacionais/programas-urbanos/biblioteca/prevencao-de-riscos/materiais-de-capacitacao/capacitacao-de-equipes-municipais/Curso_UFPE_apostila.pdf, at 22, visited 16 April 2011.

³⁵ Idem, at 22-23.

³⁶ Ibidem, at 22.

- financial support for municipalities to undertake projects in areas identified as disaster prone areas, such as corrective structural measures aiming to contain slopes.³⁷

Legal framework related to DRR

Civil defence

The legislation most closely addressing DRR in Brazil is the federal legislation on civil defence.

First of all, it is worth noting certain provisions on the subject stated in the **1988 Constitution**, namely that the Union shall have the power to “plan and promote permanent defence against public disasters, especially droughts and floods,”³⁸ and that it falls exclusively within the competence of the Union to legislate on civil defence and national mobilization.³⁹ However, as explained below, other lower administrative entities not only equally undertake activities aiming to avoid the occurrence of public disasters, but also enact legislation on civil defence, though, in practice, they tend to replicate at the provincial and/or municipal level federal legislation on the subject.

The **Constitution** further indicates that it is incumbent upon the **military fire brigades**, in addition to their duties defined by law, to carry out the activities of civil defence.⁴⁰ This has been largely interpreted as referring to disaster response actions, also taking into account the preparedness and professionalism of these forces for such tasks. However, the provision has not necessarily been understood as ruling out other actors from the undertaking of civil defence actions, especially those related to DRR.

Beyond the Constitution, Law 12,340 of 1 December 2010 is the main legal authority on the subject, together with Decree 7,257 of 4 August 2010, which revoked Decree 5,376 of 17 February 2005, as explained below.

Law 12,340/2010 covers, among other issues, the National System of Civil Defence (SINDEC), the objectives of which are to plan, articulate and coordinate civil defence actions throughout the national territory.⁴¹ It stipulates that the system is to be composed of bodies and entities of the public administration of the Union, of states/provinces and the Federal District, and of municipalities, together with civil society organizations in charge of civil defence actions.⁴² However, such a system already existed before the enactment of this law, and hence Law 12,340/2010 only modified certain aspects of the system. All stakeholders consulted during the case study severely criticized the law, largely due to the view that it confused the system that was previously in place. It is understood that Law 12,340/2010 is to be replaced by new legislation, aiming to reinsert aspects existent in the early law which were either revoked or confused by this later law. However, there are currently numerous draft bills covering

³⁷ Ibidem, at 22.

³⁸ See 1988 Constitution, article 21(XVIII). For a non-official English translation of the 1998 Brazilian Constitution, see <http://www.v-brazil.com/government/laws/titleIII.html>, visited on 18 April 2011.

³⁹ See 1988 Constitution, article 22(XXVIII).

⁴⁰ See 1988 Constitution, article 144, § 5.

⁴¹ See Law 12,340, of 1 December 2010, article 1.

⁴² See Law 12,340, of 1 December 2010, article 2.

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aspects related to civil defence, and therefore it is likely that more than one law, rather than a single bill, will take up the task to adjust the system.⁴³

One of the key objects of criticism is that Law 12,340/2010 regards the “accession” of administrative entities to the SINDEC,⁴⁴ which raises the question of whether, in the event of a disaster, municipalities or further administrative entities which have not formally acceded to the system would qualify for eventual support from it. Since the right to life is one of the fundamental provisions enshrined in the 1988 Constitution,⁴⁵ it has been suggested that it would not be possible to deny support in such a case, even in relation to administrative entities that have not formally joined the system. However, the mere reference to such a formality in the law raises an issue, since its very meaning is disputed. Conversely, in relation to DRR and prevention efforts, during the research it has been widely suggested that joining the system is a pre-condition for administrative entities (notably municipalities) to receive support from the system (especially in the form of training for local staff).

It is also to be noted that the emphasis of Law 12,340/2010 is on response efforts, and thus only on events after a disaster has occurred. It regulates, among other issues, the obligatory allocation of money from the Union to administrative entities (states/provinces and the Federal District, but most notably municipalities) in order to assist victims in reconstruction efforts towards reaching a state of normality.⁴⁶ The law further regulates a special fund (Special Fund for Public Calamities – FUNCAP) which aims to financially support reconstruction in areas affected by disasters.⁴⁷

Another issue that might, at first sight, be perceived as of general character but which nevertheless helps to contextualize the legal framework of DRR legislation in Brazil concerns the way in which Law 12,340/2010 was issued. The origin of this law was **Provisional Measure 494 of 2 July 2010**, which was subsequently converted into Law 12,340/2010. In Brazil, provisional measures are the most controversial type of normative acts, since they follow an exceptional procedure in which the chief of the Executive of the country (the President of the Republic) drafts and adopts a text, which has the force of law immediately after publication.⁴⁸ This exceptional manner of making law was introduced in the 1988 Constitution, which indicated that, in “important and urgent cases,” the President of the Republic may adopt provisional measures with the force of law and shall submit them to the National Congress immediately. The two houses of the National Congress are then assigned the task of voting and, if approved, converting the text of the provisional measure into a piece of ordinary “permanent” law. Over the years, practice has demonstrated that the procedure has been used recurrently in situations and on matters whose importance and urgency were very much debatable. Later amendments to the 1988 Constitution tried to define stricter limits for the use of provisional measures, notably that they would lose effect if not converted into “per-

⁴³ There are several ongoing draft bills related to Civil Defence and DRR before the National Congress (Federal Parliament). One such example is PLS 26/11, which sets the obligation for municipalities to map risk areas within their territories, as well as deadlines and sanctions in case of noncompliance, and establishing a national catalogue of risk areas, with a view to improving action to be taken by different actors partaking in the National System of Civil Defence.

⁴⁴ See Law 12,340, of 1 December 2010, article 2, §1.

⁴⁵ See 1988 Constitution, article 5: ‘All persons are equal before the law, without any distinction whatsoever, Brazilians and foreigners residing in the country being ensured of *inviolability of the right to life, to liberty, to equality, to security and to property*, on the following terms: ...’ (emphasis added)

⁴⁶ See Law 12,340, of 1 December 2010, article 4.

⁴⁷ See Law 12,340, of 1 December 2010, article 7 and following articles.

⁴⁸ See 1988 Constitution, article 62.

manent” legislation by the National Congress within sixty days of being issued by the President, provided that they could be extended for another sixty days in cases where the National Congress did not manage to vote on them within that period. However, it is often argued that there has been an abuse of the use of provisional measures, and that MPs tend to vote for provisional measures quickly in order to comply with deadlines and often in the affirmative because of the influence of the President.

Against this background, the text of Law 12,340/2010 largely reflects Provisional Measure 494, of 2 July 2010, which was issued following natural disasters that affected Brazil at that time (floods in the northeast of the country). Being a text hastily drafted and adopted via this urgent law-making mechanism, and although it covers subjects such as the very organization of the SINDEC, it is perhaps of little surprise that the final text was met with criticism from those working in the area of civil defence and DRR who argued that the piece was drafted by persons with little knowledge of the subject.. Despite the fact that the current law (12,340) is quite recent (of 2010), according to those interviewed it has numerous flaws and it is expected to be replaced by a more carefully drafted bill(s).

Another important legal standard is (Presidential) **Decree 7,257 of 04 August 2010**. It was drafted to regulate Provisional Measure 494 of 02 July 2010, which later became Law 12,340 of 01 December 2010, already cited. Although its main focus is undoubtedly on response to and recovery after disasters, it makes some important references to DRR. One such example is that it defines preventive actions as “actions aimed at reducing the occurrence and intensity of disasters, through identification, mapping and monitoring of risks, threats and vulnerabilities, including capacity building of the society in civil defence among others activities established by the Ministry of National Integration.”⁴⁹ It further seeks to organise the SINDEC, but, according to different stakeholders consulted, it rather brings more confusion into the existing system. For most of the actors interviewed, the previous presidential decree on the subject (**Decree 5,376 of 17 February 2005**) addressed the issue in a much more satisfactory way. A comparison of the two standards on concrete issues will be highlighted later on in the detailed findings of the current report. Nevertheless, one may note that the legislative framework directly covering DRR is based upon a rather fragile basis, with one significant piece of legislation - Law 12,340/2010 (with its conflicted origin in a provisional measure), and two presidential decrees (Decree 5,376/2005 and Decree 7,257/2010, the first of which was expressly revoked by the second). One could suggest that a broad parliamentary debate on the issue does not seem to have taken place so far, although the debate on the topic by civil society is considered a positive feature to be highlighted, as presented in the detailed findings of the report.

Two other pieces of legislation, although of more limited character, are of interest in relation to DRR. The first one is **Provisional Measure 522 of 12 January 2011**, allocating R\$ 780 million (Brazilian reais, about US\$ 480 million) to the MNI and the Ministry of Transports for response emergency actions (especially the recovery of federal roads damaged by disasters) and prevention and preparation for disasters (broadly listed as mitigating constructions, response to disasters and reconstruction, and civil defence actions). The measure follows recent disasters that hit the country, especially episodes of severe floods (notably in hill areas of Rio de Janeiro State) and drought.⁵⁰

⁴⁹ See Decree 7,257, of 04 August 2010, article 1 (IX).

⁵⁰ For an official press release on this provisional measure, see <http://www.casacivil.planalto.gov.br/?p=5729>, visited on 18 April 2011.

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The second relevant piece of legislation is **Law 12,334 of 20 September 2010**. This sets the National Policy for Dam Safety, which provides for broad public participation in the process through access to information and mechanisms for social participation, as well as publication of reports on regular security inspections of dams, and it sets the general lines for an education and communication program on dam safety. This law seems to provide an interesting model on the subject, although when asked, few stakeholders knew about its existence, perhaps due to the fact that it covers a very specific issue, or perhaps due to the fact that, to date, it has not been widely implemented.

Building codes and land management

In Brazil, municipalities currently have the exclusive competence to legislate on **building codes**. There is an ongoing discussion on the possibility and advantages of the adoption of a single national building code, most likely through cooperation between the MoC and several ministries and entities with expertise on the subject. The main goal of having a single building code would be to agree upon general common standards to be observed in constructions throughout the country in relation to the physical dimensions of buildings allowed in different areas, accessibility, etc.⁵¹ However, some stakeholders expressed the view that, in relation to DRR, building codes do not play a key role in Brazil, especially taking into account that there have been no incidences of major earthquakes or other seismic events in the country.⁵² Floods and landslides are recurrent events, but these were generally perceived as being best addressed through land management codes setting urban development policies, namely codes determining which areas within the limits of each municipality are assigned for building purposes.

Such **land management codes** are another kind of legislation primarily within the municipal realm of legislative power (though municipalities have to follow certain general directives set for the country by the Union⁵³ in federal law⁵⁴). They are known as **Master Plans** (Planos Diretores). According to the 1988 Constitution, municipalities with over 20,000 inhabitants have the obligation to adopt a Master Plan, which is to be approved by the City Council, and which is considered the basic instrument on urban development and expansion policy.⁵⁵ Normally, Master Plans will determine how areas of the municipality are to be used so as to better achieve their social function (to be used either for housing, industry, commercial, leisure or other purposes). Nowadays, it is expected from municipalities that they ensure wide participation of the community in the drafting process of Master Plans. For example, in the municipality of Florianópolis (visited during the mission), since 2006 there have been ongoing efforts to redesign such a plan, called a Participatory Master Plan, which is being drafted with extensive discussion and consultation with communities throughout the municipality (which may perhaps explain the length of the exercise).⁵⁶

⁵¹ Information obtained during conversation with representatives of the MoC. For general information on building codes in Brazil, see, for example, http://www.edifque.arq.br/nova_pagina_18.htm, and also <http://www.portaldoarquitecto.com/destaques/arquitetura/4467-asbea-planeja-o-codigo-de-obras-nacional>, both visited on 19 April 2011.

⁵² Information obtained during conversation with representatives of the MoC.

⁵³ See 1988 Constitution, article 21.

⁵⁴ One of the most relevant federal law on this regard is Law 10.257, of 10 July 2001, setting the Statute of the City, to be explained later.

⁵⁵ See 1988 Constitution, article 182, §1.

⁵⁶ For official coverage on the subject, see the website of the municipality of Florianópolis, <http://www.pmf.sc.gov.br/entidades/ipuf/?cms=etapa+conclusiva+pdp>, visited 19 April 11.

Also in relation to DRR, the MoC has technically, but mostly financially supported municipalities in **mapping their disaster risk areas**, crucial information that should also be taken into account when drafting Master Plans. However, to date, this has been done through initiatives of the federal government, which have a public policy character but do not constitute legally binding legislation.

Further related federal legislation relevant to building and construction is indicated below. Beyond presenting particular features of relevance for DRR, these laws aim to support the realization of the right to housing, which is a major issue for the poor part of the population, most severely affected by floods and landslides.

- **1998 Constitution** – Lists, in article 6, social rights, among them the **right to housing**. Several recent laws and programs address the right to housing; the most significant ones are described in this report.
- **Law 10,257, of 10 July 2001 (Statute of the City)** – Sets the general framework for urban policy in Brazil. It is a landmark piece of legislation setting several relevant principles, among them the right to sustainable cities, democratic and popular participation in all phases of and initiatives on urban development, and the planning of cities, aiming to tackle urban growth, negative effects upon the environment and ensure the safety of the population.
- **Law 11,124 of 16 June 2005 (Social Housing)**, followed by regulatory **Decree 5,796, of 6 June 2006**. This law was the result of a popular initiative resulting in a bill that remained under consideration by the National Congress for over 10 years. It was finally adopted during the mandate of former President Lula. The law represents a landmark achievement for social movements, seeking to assist vulnerable populations to realize their right to housing through the establishment of a National System for Social Housing and a related fund. The main goal is to promote various measures which the most vulnerable sectors of the population may have access to urbanized land and to a dignified and sustainable home.
- **Law 11,888, of 24 December 2008 (Free Technical Assistance for Social Housing Projects)**. Although promising, this law has been criticized since it was not followed by effective implementation mechanisms.⁵⁷ Hence, although it sets interesting principles of ensuring free technical support for those building social houses (including the need to avoid occupation of disaster risk areas), in reality little regard has been paid to it so far.
- **Law 11,977, of 07 July 2009 (Program ‘My House, My Life’)**. This promising piece of legislation was established with wide governmental support (political and financial). It especially aims at legalizing illegal urban settlements and is having a positive impact on poor areas throughout the country. Among the criteria to be observed when identifying beneficiaries is to give priority to families (broadly understood) living in (disaster) risk prone or unhealthy areas, or those who have been homeless.⁵⁸ Thus, much on DRR in the country is being done in the framework of this law, with the aim to mitigate disaster risk areas, or, if not feasible, to resettle poor families in safer areas, as discussed later.

Environmental legislation and DRR

- There are several legal texts which protect the environment and may be of interest for DRR purposes. Below some of the key texts in this regard are listed. First of all,

⁵⁷ Conversation with representatives of the Ministry of Cities.

⁵⁸ See Law 11.977/2009, article 3 (III).

Legislative framework for disaster risk reduction

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it is worth noting that one of the key achievements of the **1998 Constitution** is to include a provision on the protection of the environment in its text.⁵⁹ Among other measures, it lays down that public authorities shall require, for the installation of works and activities which may potentially cause significant degradation of the environment, a prior environmental impact assessment, which shall be made public. It also indicates that public authorities shall promote environmental education at all school levels and public awareness of the need to preserve the environment.

- Brazil is a party to the **United Nations Framework Convention on Climate Change (UNFCCC)**, which has been brought into Brazilian national legal order (promulgation) through Presidential Decree 2,652 of 1 July 1998, thus becoming legally binding to all public authorities. Furthermore, **Law 12,187 of 29 December 2009** set the **National Policy on Climate Change**, aiming, among other things, to implement measures to promote the adaptation to climate change in collaboration with beneficiaries especially vulnerable to its negative effects.⁶⁰ Moreover, the policy aims to achieve sustainable development through economic growth, poverty eradication and reduction of social inequalities.⁶¹
- **Law 9,795 of 27 April 1999 (National Policy on Environmental Education)** sets environmental education as an essential component within national education, and refers to formal (school and university level education) and also non-formal education (especially through the media), in order to reach and inform all sectors of the population on environmental issues. Although not directly referring to DRR, some of its aspects could well be highlighted through this legal basis.
- **Law 4,771 of 15 September 1965 (Forest Code)**. Currently under review, this law defines, among other issues, certain areas for permanent preservation, which are protected by law due to the environmental role they play (for example, areas considered crucial for the protection of soils from erosion and for the maintenance of geologic stability). Thus, the exercise of property rights by landowners (urban or rural) is qualified by certain provisions set forth mainly by this law. One such example (which is one of the key issues being debated in the new draft Forest Code bill⁶²) is that 30 metres of areas covered by forests or other forms of natural vegetation located along rivers (with less than 10m of width) are protected by law.⁶³ The ongoing draft bill aims to reduce these areas from 30m to 7m, due especially to mounting pressure from the agricultural interests, which argues that the current legal model is out of date and that it hampers the development of the country. Another example of areas currently defined as eligible for permanent preservation and which shall lose protection in the future bill are the top of hills and slopes with more than 45 per cent declivity. Civil society, environmentalists and the scientific community are currently mobilized against such legal changes, which, they argue, will have a serious negative impact on climate change and increase the number and level of disasters throughout the country.⁶⁴

⁵⁹ See 1988 Constitution, article 225.

⁶⁰ See Law 12.187/2009, article 4 (VI).

⁶¹ See Law 12.187/2009, article 4 (last paragraph).

⁶² The draft Bill is the 'substitutivo de PL 1876/1999.

⁶³ See Law 4,771/1965, article 2(a).

⁶⁴ See, for example, examples of civil society mobilization against the changing in the law in the newspaper article <http://www.estadao.com.br/noticias/vidae,fundacao-grupo-boticario-lanca-video-sobre-codigo-florestal,698518,0.htm>. See also video on the topic by civil society organization www.sos.florestas.com.br, available at http://www.youtube.com/watch?feature=player_embedded&v=p_3tXpu1-IM#at=10, visited on 19 April 2011.

- Another interesting piece of legislation is **Law 9,605 of 12 February 1998 (Environment Crimes Law)**, which lists a series of actions detrimental especially to the fauna and flora, setting forth punishment (including, among others, services to the community, fine and imprisonment) to individuals and institutions who violate the law. One of the potentially punishable actions is the cutting of trees in forests considered as areas of permanent preservation, which may be punished with detention (1-3 years) or fine, or the imposition of both.⁶⁵ However, should the 1965 Forest Code be changed, thus reducing areas of permanent preservation, as indicated before, this might also reduce the number of situations in which Law 9,605 applies.
- Also worth mentioning is **Law 9,966, of 28 April 2000, covering the discharge of oil and other harmful or dangerous substances into national waters**. Brazil is party to international treaties related to this matter⁶⁶ and Law 9,966/2000 follows up on these efforts, defining among other things the notion of emergency and contingency plans, and setting general lines for systems aiming to prevent, control and combat pollution.

Legislation on nuclear issues

Brazil has two active nuclear plants and one under construction (Angra 1, 2 and 3, respectively) used for peaceful purposes and located in the state of Rio de Janeiro (in an area between hills and the sea, with relatively difficult means for evacuation in case of floods or landslides, due to the fact that the main road reaching the area is often obstructed due precisely to landslides in the surrounding area⁶⁷). There is a set of legal texts covering the establishment and use of nuclear energy in Brazil, some of which cover disasters and preventive measures.⁶⁸ Also, the 1998 Constitution sets forth the obligation that nuclear plants shall have their location defined in federal law and may not otherwise be installed.⁶⁹ This shows the importance already being afforded to the subject of nuclear energy by the time of the adoption of the Constitution. Since the recent Japan nuclear disaster at Fukushima, there has been mounting pressure against the expansion of Brazil's nuclear program, both internally (largely by civil society and environmental groups) and externally (the technology transferred to Brazil was mainly from Germany, which is reviewing its policies on the matter).⁷⁰

⁶⁵ See Law 9,605/1998, article 39.

⁶⁶ Among other treaties on the subject, Brazil is a state party to the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC) and the 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC).

⁶⁷ See, for example, video footage on the subject available at <http://mais.uol.com.br/view/99at89ajv6h1/evacuar-usinas-de-angra-seria-complicado-diz-especialista-04021B356AD8B17327?types=A>, visited on 19 April 2011.

⁶⁸ The legal framework covering nuclear energy in Brazil includes, among others, Law 4,118, of 27 August 1962, setting the National Policy on Nuclear Energy; Law 6,453, of 17 October 1977, on civil and criminal responsibility for nuclear damage; Decree-Law 1,809, of 07 October 1980, establishing the Protection System to Brazil's Nuclear Program; and Law 10,308, of 20 November 2001, on radioactive waste.

⁶⁹ See 1998 Constitution, article 225, § 6.

⁷⁰ See, for example, news report at <http://veja.abril.com.br/noticia/brasil/accidente-nuclear-no-japao-ameaca-programa-brasileiro>, visited on 19 April 2011.

Analysis of legislation related to disaster risk reduction in Brazil

Chapter 4

Findings

Institutional clarity

Organization of the civil defence and DRR

In relation to civil defence, a presidential decree regulating legislation set up an apex committee with advisory tasks, composed of representatives of certain related ministries and other actors, called the CONDEC (National Council on Civil Defence).⁷¹ However, according to the perception of the great majority of the stakeholders consulted, its responsibilities are not clearly defined, though it seems discussion is growing on how to improve this and other perceived shortcomings of the legislative framework applicable to civil defence.

Regarding CONDEC's functions, it is worth highlighting that the previous decree on the matter assigned to this body a normative, deliberative and consultative status.⁷² As already noted, this competence was reduced by a later decree, which limited CONDEC's activities to merely advisory functions, thus restricting its powers to proposing directives regarding the national policy on civil defense.⁷³

Such legislative changes also affected CONDEC's composition. While under the previous decree the plenary of CONDEC was composed of representatives of practically all ministries of the country (23 ministries),⁷⁴ the current decree reduced the number of ministries represented considerably to just five.⁷⁵ Some stakeholders praised the change, arguing that having fewer ministries involved improved CONDEC's ability to quickly meet and get on top of things, especially because, arguably, some of the representatives of the previous long list of ministries were either often replaced, or had little knowledge of the CONDEC and its subject matter.⁷⁶ The perception of other stakeholders was that the change was an unwelcome move, arguing mainly that national policy on DRR should permeate the country's overall governmental policy, and that it should therefore be discussed and adopted with the input of all ministries. Consequently, the move to exclude the great majority of ministries from the CONDEC was criticized, especially in relation to certain key ministries directly related to DRR, such as the Ministry of the Environment, which no longer figures in CONDEC.⁷⁷

Some stakeholders further suggested that the weak political structure and status of the National Secretariat of Civil Defence also negatively impacts its work, arguing that it should rather be either a detached ministry by its own, and thus collaborating on an equal level with other ministries, or a special office-secretariat attached to the presidency whose policies and subject-matter should permeate and be taken into account by all different ministries. For example, they argue that, when another ministry plans to build a bridge, expand or repair a highway, it should take into account the likelihood of disasters occurring, and how to build in a way capable of coping with such a situation.⁷⁸ While this is sometimes done instinctively, it should be prescribed as a matter of course and holistic policy, with better coordination and collaboration among different governmental sectors. Several examples of poor observance of DRR by different sectors of the public administration were raised during the consultancy, including the reconstruction

⁷¹ See Decree 7,257/2010, article 6.

⁷² See Decree 5,76/2005, article 6.

⁷³ See Decree 7,257/2010, article 6.

⁷⁴ See Decree 5,376/2005, article 8.

⁷⁵ See Decree 7,257/2010, article 6, §1.

⁷⁶ Conversation with representatives of the NSCD/SEDEC.

⁷⁷ Conversation with representatives of the CD-SC.

⁷⁸ Conversation with representatives of CEPED-UFSC and the CD-SC.

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efforts that followed the 2008 catastrophe in Ilhota, during which the municipality was hit heavily by intense rain and mudslides. Although a bridge in the affected area was later reconstructed, apparently with funds from different public entities, it fell apart shortly afterwards due to strong rainfall – and arguably due to poor attention to DRR because they merely rebuilt the bridge as it was before, without extending the built area in order to make sure that the bridge started and ended on a more stable land, so as to reduce the risk of it falling down in the event of another flood).⁷⁹

The first model just mentioned regarding the elevation of the political status of civil defence in terms of its institutional apparatus is currently being adapted, and soon to be set in place at the state/provincial level in Santa Catarina. There, the State/Provincial Department of Civil Defence is currently linked to the Secretary of Public Security. The idea is that in the near future it will be a detached Secretariat directly linked to the state/provincial government.⁸⁰

It can be said that there is a law covering the general structure and issues regarding civil defence (Law 12,340/2010, regulated by Decree 7,257/2010). However the current legal framework is far from clear, making its application rather confused, in particular because it does not precisely indicate the role of different actors in a disaster situation. Much remains to be clarified and interpreted by actors themselves, with the trust that everyone acts in good faith. It is to be noted that the previous decree⁸¹ was considered by the great majority of stakeholders as setting a clearer framework regarding civil defence actions (and also on DRR), and that the current legal framework is silent on many issues previously regulated.

One such example relates to tasks previously assigned to COMDECs (Coordination Office(s) of the Municipal Civil Defence, namely municipal bodies in charge of local civil defence). In the previous decree covering the matter, it was among the COMDECs' responsibilities to "inspect buildings and areas of risk and promote joint or preventive intervention, the isolation and evacuation of the population in areas of heightened risk and vulnerable buildings."⁸² According to some stakeholders, COMDECs continue to do their best to act in such cases, but this is out of common sense, and not out of a clearly defined legal obligation.⁸³

On issues such as contingency plans, alert systems etc., stakeholders generally considered that such tasks should primarily fall within the municipal realm of responsibility, although the currently applicable legal framework does not clearly regulate the matter. On a positive note, certain stakeholders, such as for example SEDEC and CEPED-UFSC, in partnership with different governmental institutions, conduct regular courses covering these and related subjects (for example, on how to set up and implement the Incident Command System, inspired by the US model of command structure in disaster situations)⁸⁴ for municipal authorities to better prepare for and work on DRR and further issues. They offer live on-site courses with personnel from municipalities, as well as distance learning courses, and have in the last few years trained over 8,000 persons (especially personnel of municipal public services) throughout Brazil.

⁷⁹ Conversation during visit to Ilhota, with representatives of ADARB and of the municipality.

⁸⁰ This change was indicated by different stakeholders met in Santa Catarina, especially CD-SC, MPE-SC, CEPED-UFSC.

⁸¹ Decree 5,376/2005.

⁸² See Decree 5,376/2005, article 13 (VIII).

⁸³ Conversation with COMDEC representative in Florianópolis.

⁸⁴ Conversation with CEPED-UFSC and also magazine 33 Com Ciência Ambiental, 58-65, at 61 (2011).

At the federal level it was pointed out that, currently, the INPE (National Institute for Space Research, which is technically linked to the Ministry of Science and Technology), in collaboration with other ministries (especially MNI) and governmental bodies (notably the Home Office) is currently setting up a system with adequate equipment (computers, radars, etc.), estimated to have cost about R\$ 10 million, in order to monitor eventual upcoming natural disasters hitting the country. The intention is to gather precise information that will enable the issuing of alerts, as well as the mapping of risk areas throughout the country.⁸⁵ The same kind of special technical monitoring unit has been recently set up in the municipality of Rio de Janeiro. It is expected that, at the federal level, the system will be ready by November 2011, before the fall of heavy rains that normally hit the country by that month (summer rains). By then, it was suggested that approximately 60 municipalities should have their risk map completed with the support of the new system. After the setting up of the national centre, the idea is to replicate it at the regional level over the following four years, at an approximate cost of R\$ 250 million.

However, some stakeholders suggested that, even with such an information system in place, without effective community-level work, little can be done to prevent disasters occurring. Also the very term “civil defence” was challenged by some stakeholders, claiming that it reflected the wrong idea, suggesting action only after a disaster has occurred. Instead, it was suggested that the expression “civil protection” was preferable, as it arguably expresses both prevention and response efforts, though it was recognized there are no real prospects of changing the nomenclature currently used.⁸⁶

Physical improvements for DRR

Both the Ministry of National Integration (notably the SEDEC) and the Ministry of Cities undertake physical interventions through structural engineering works in order to reduce disaster risks.

Municipalities are meant to undertake the mapping of risk areas within their jurisdiction, although this is not based on a clear legal obligation. They may apply for financial support for such an exercise from one of the two ministries. Currently, 54 municipalities have carried out risk mapping and sent it to the Ministry of Cities (out of 5,565 in the country). After the mapping, municipalities are meant to identify which areas are subject to greater risk, and then offer proposals for projects with interventions (engineering works mitigating risks and/or capacity building, awareness raising, etc.). It seems that the Ministry of Cities will collaborate mostly in cases where risk areas involve densely populated areas, especially where poor individuals are at risk, while the Ministry of National Integration becomes involved in these and further cases. Furthermore, the Ministry of Cities does capacity building for technicians working at local and regional level, especially on engineering interventions that need to be made.

Regarding the **provision of information to communities on disaster risks**, the Ministry of National Integration (notably SEDEC) organises several capacity building initiatives, especially with the personnel of municipalities. It also publishes supporting material.

In relation to **contingency plans**, it is not clear currently who is in charge of developing such plans, since the applicable legal framework is rather vague. Nevertheless, some organs have developed their own plans covering preparation and response to disaster,

⁸⁵ Conversation with representatives of the MCT.

⁸⁶ Conversation with representatives of the CD-SC.

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which are constantly revised. One such example relates to health issues, which are generally addressed by contingency plans adopted by the Ministry of Health, in order to support local and regional efforts (especially on the distribution of medical kits for the affected population).

Resource streams for DRR activities at appropriate level

In order to access the resource streams of the Ministry of National Integration (notably via SEDEC), municipalities and provinces have to draft projects on structural (engineering works) or non-structural measures (capacity building, awareness raising activities) to be undertaken on the territories under their respective jurisdiction. This is mainly due to the “federal clause” explained above. Although the Ministry cannot impose programs and measures on DRR to be undertaken in provinces and municipalities, it may ask them to join ongoing initiatives. However, the method for selecting the best projects is still to be defined, and there is no clear legislation on the criteria to be taken into account.⁸⁷ It should also be noted that, in the past, there have been complaints regarding the distribution of resources by the MNI, according to surveillance carried out by the Budget Auditing Authority (TCU),⁸⁸ and also respective reports by NGOs⁸⁹ and the international media.⁹⁰ These developments occurred during the mandate of a former Minister of National Integration, who allegedly spent over 45 per cent of the budget on interventions in his own state of origin (Bahia). From early 2011 a new Minister and a new Secretary took over, and the ministry has been busy coping with large-scale disasters affecting Brazil (especially the disaster on the hill areas of Nova Iguaçu, Petrópolis, and other municipalities within the State/Province of Rio de Janeiro).

There are clear signs of optimism among different stakeholders with the new direction being taken by the MNI and SEDEC, which are arguably trying to follow upon international initiatives (especially the Hyogo Framework for Action). Thus, there are ongoing efforts to adopt the Brazilian Platform on Disaster Risk Reduction, to organize international seminars on DRR, as well as to undertake structural and non-structural measures throughout Brazil, although municipalities still tend to focus their pledges on response rather than prevention. It is also to be noted that Brazil so far has neither an overall precise mapping containing the record of all disasters that have occurred in the country, nor data on the number of deaths and other losses,⁹¹ although it was mentioned that some states have worked on their own initiative to improve this situation. Santa Catarina, for example, has developed its own “atlas of disasters.”⁹²

On a concluding note it can be said that, in relation to civil defence, no clearly defined responsibilities are set regarding DRR. Much is left to discretion and seems to be

⁸⁷ Conversation with SEDEC representatives.

⁸⁸ See TCU’s decision n. 729/2010, of 7 April 2010, case n. 008.556/2009-3. It was identified that the national civil defence operated with absence of objective criteria for distribution of funds for construction and prevention. It was determined to SEDEC/MNI, among other measures, to adopt and disclose the objective criteria for allocating resources for preventive work in order to ensure they are allocated in those areas most at risk and help to mitigate the human and material losses resulting from adverse natural events.

⁸⁹ See material especially of Brazilian NGO ‘Contas Abertas’, <http://contasabertas.uol.com.br/WebSite/Noticias/DetalheNoticiasImpressao.aspx?Id=349>, visited on 20 April 2011.

⁹⁰ See, for example, coverage on the subject by the magazine ‘The Economist’, of 20 January 2011, entitled: ‘Disaster Prevention in Brazil – After the flood why did so many die?’, http://www.economist.com/node/17967056?story_id=17967056&fsrc=rss, visited on 20 April 2011.

⁹¹ Conversation with UNDP representative.

⁹² Conversation with CD-SC.

decided in an *ad hoc* manner upon an emergency situation arising. This is due especially to the fact that certain legal standards that contained more precise information were revoked, although some partners seem to continue to observe some “good aspects” of this early legislation, which they consider should not be completely disregarded. New legislation is planned to be approved and to reinstitute some elements of previous legislation, thus clarifying the subject and providing better guidance, especially to local bodies.

Community-level analysis

It seems there is no clear legal obligation setting out specific requirements concerning disaster risk mapping at the community level. Nevertheless, there are some examples of municipalities that have developed a PMRR (Municipal Plan for Risk Reduction). One such example is Florianópolis, which completed this exercise with the financial support of the Ministry of Cities and technical support from CEPED.

The fact that some municipalities have done the risk mapping does not necessarily mean that their quality was uniformly high. Ongoing discussions in the Ministry of Cities suggest that there is a need to set up a quality control mechanism to address this and related shortcomings (and also in relation to the quality of Director Plans drafted by certain municipalities). As already mentioned, efforts are underway to produce a national mapping of risks, thus covering the territory of the entire country, which has never been done to date.⁹³

In relation to information gathered by civil society organizations (such as the Brazil Red Cross Society), especially on risk mapping and community vulnerability, legislation does not indicate clearly whether the government could or could not use such information.

However, it should be noted that stakeholders were not necessarily sympathetic to the idea that these issues should be addressed by legislation. Some suggested that a more suitable framework would be ministerial regulations.⁹⁴

Community information

There is no legislation clearly providing for **education on disaster risk reduction**, at least directly. Be that as it may, there is legislation on education on environmental issues, which could, in principle, be used to cover DRR issues. The legal statute is (Federal) Law 9,795, of 27 April 1999 (National Policy on Environmental Education), whose interesting feature is that it provides for environmental education not only at different levels (school and university), but also covers non-formal education. Hence, it promotes the broadcasting of material on environmental education in the media and through further public campaigns, so as to include sectors of the population which otherwise would be unlikely to benefit from this information. Though proactive and democratic, the implementation of this legislation remains a work in progress.

Despite the absence of legislation as such on DRR education for children and adults, certain noteworthy initiatives have been undertaken in this regard. One such initiative is the project ‘Perception of Risk’ (Percepção de Risco), a partnership between Civil

⁹³ Conversation with SEDEC and CEPED-UFSC.

⁹⁴ Conversation with COMDEC-Florianópolis.

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Defence-SC and CEPED-UFSC, launched in 2008. The project developed and distributed 2,000 educational kits and 70,000 comics for 1,324 public elementary schools, as well as communities living in risk areas. The project has reached over 60,000 students, 36 regional education managers, and 293 Civil Defense committees (at the municipal and community level). The State/Province of Santa Catarina allocated over R\$ 1 million for the project from its State Fund of Civil Defense.⁹⁵ In addition, a documentary film was produced in the framework of the project, which gathered interviews with different actors related to DRR and was awarded a national prize (in the 4th International Socio-Environmental Film Festival, which took place in Nova Friburgo, one of the areas severely affected by recent floods in Rio de Janeiro State/Province).⁹⁶ The project was concluded at the end of 2010, but it is expected to be repeated since, according to key stakeholders (local government and community leaders), a change in the perception of the population regarding DRR is a lengthy and slow procedure.

An example of a small-scale educational initiative on DRR is the Watercolor (Aquarela) project, carried out after the disaster which severely hit the region of Morro do Baú, in Ilhota in 2008. The project lasted until October 2010 and it raised awareness among local children, youth and NUDECs (Civil Defence Community Groups) on prevention of and response to disasters, using different techniques including drawing and painting, playful activities and discussions. During the researcher's visit to Ilhota it was suggested that there are plans to restart the project soon, with the view to work especially on DRR activities.⁹⁷

In relation to **disaster warning**, it seems that there is no applicable legislation.⁹⁸ Nevertheless, it was pointed out that certain practical initiatives in this regard occur at the local level. One such example is the Municipality of Rio de Janeiro, where alerts are issued by the Municipal Civil Defence and are forwarded via SMS to mobile phones of heads of community associations, who are previously instructed to act upon the receipt of such a message, notably by informing their community about the alert and moving them to the pre-assigned assembly points until further notice indicates an improvement of the situation.⁹⁹

A similar system has been set up in the Province/State of Acre, in the northwest of Brazil, where SMS messages are sent to Community Health Agents (Agentes Comunitários de Saúde), members of the community trained to raise awareness on health issues and to carry out related interventions, such as distribution of health material, demonstrations of purification of water stored in home based water tanks.¹⁰⁰ The Province of Santa

⁹⁵ See <http://ceped.ufsc.br:8090/noticias/documentario-do-projeto-%E2%80%9Cpercepcao-de-risco%E2%80%9D-da-defesa-civil-e-premiado>, visited on 21 April 2011.

⁹⁶ 2010 Award as best film (documentary), Prize Alcantarea Imperialis, 'PERCEPÇÃO DE RISCO - A Descoberta de um novo olhar' (PERCEPTION OF RISK - The Discovery of a new look'), from Sandra Alves and Vera Longo. The film covers issues such as climate change, disaster risk reduction, vulnerability, prevention, and social climate disasters. For the trailer, see <http://vimeo.com/17008268>, visited on 21 April 2011.

⁹⁷ Conversation with representative of the municipality of Ilhota.

⁹⁸ The only exception that may be referred to is legislation on nuclear issues, which is far better developed and more precise than general legislation on civil defence.

⁹⁹ For more info, see leaflet 'Educando para a Proteção Comunitária – Sistema de alerta e alarme comunitário para chuvas fortes', issued by the Municipality of Rio and the Civil Defence of that City. Hard copy handed over to the consultant. See also website www.rio.rj.gov.br/defesacivil, visited on 18 April 2011.

¹⁰⁰ See video 'Vigilância em Saúde nos Desastres – a experiência de Rio Branco-AC', project communication in health, audiovisual production on health surveillance, issued among others by the by Health Ministry and FIOCRUZ. See www.fiocruz.br/videosaude and www.saude.gov.br/svs, visited on 18 April 2011.

Catarina has also indicated that, after the hurricane, it set up an alert system, aiming to instruct the population on how to react in order to protect themselves.¹⁰¹

In relation to the question of whether existing legislation provides for mandatory disclosure of disaster risks known to government agencies and/or private actors, there is no specific legislation in this regard. Nevertheless, the absence of specific legislation should not necessarily hamper the possibility of a more protective interpretation being given to general legal texts, so as to address the eventual responsibility of public authorities in relation to affected communities, for example, with regard to the right to life of disaster victims. However, the question has no clear answer, and some argue that eventual state responsibility for omission could only be found in cases where there was an express legal provision clearly indicating the obligations of public authorities in this regard, and what sanctions they would incur in case of non-observance. This interpretation is mainly based on the constitutional principle of legality,¹⁰² according to which the state has to operate in accordance with the law (and not merely out of the personal interests of public authorities).¹⁰³

Community consultation

Legislation and policies adopted in recent years (mostly during the “Lula era” - his two presidential mandates covering the period 2003-2011), suggest a clear tendency towards enhancing popular consultation and participation. Examples of this can be found in relation not only to the subject matter of the current study, but also in regard to further areas. One such example is the CONSEA (National Council for Food Security and Nutrition), a coordinating body between the government and civil society with the task of proposing guidelines for action in the area of food and nutrition throughout the country, which is replicated at state/provincial and municipal levels. These bodies are composed of civil society representatives, together with public authorities and observers. They are one of the earlier mechanisms for public consultation and participation in relation to public policies, notably in the implementation and follow up of actions related to the “Zero Hunger” (Fome Zero) program, the flagship program of Lula’s government.

Similarly, regarding the public health system of the country, there is a system of community consultation and participation called “Health Councils” (“Conselhos de Saúde”), which are deliberative collegiate bodies that are meant to oversee the unified health system, and in which community representatives amount to 50 per cent of the participants.¹⁰⁴ In the field of housing and urban policies there is a similar consultative and participatory mechanism, namely the “Council of Cities” (“Conselho das Cidades”), which is a collegiate body with deliberative and advisory functions integrated in the structure of the Ministry of Cities, which aims to study and propose guidelines for the formulation and implementation of the national urban development policy, as well as monitoring its execution. The Cities’ Council is composed of different sectors of the population, such as representatives of popular movements, businesses, NGOs, professional, academic and research organizations, labour unions and governmental offices

¹⁰¹ Conversation with CD-SC.

¹⁰² See 1988 Constitution, article 37.

¹⁰³ See, for example, Leal, R., ‘A Responsabilidade civil do Estado brasileiro por omissão em face de desastres e catástrofes naturais causadoras de danos materiais e imateriais a terceiro’, in 119 Revista da AJURIS – Associação de Juizes do Rio Grande do Sul (2010), 185-234, at 228-230.

¹⁰⁴ Law No. 8,142 of 28 December 1990 indicates the composition, organization and competence of Health Councils.

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from the three tiers of government. It is also to be noted that the Ministry of Cities has already carried out four national conferences concerning its subject area (the first in 2004), a forum for debate which also had extensive community participation, with representatives coming from all over the country.

In relation to civil defence, an example of civil society consultation and participation can be identified in relation to the body responsible for proposing civil defence policies, the CONDEC (Conselho Nacional de Defesa Civil). However, the way in which such civil society representatives are chosen is not entirely clear. In a conversation with a representative of the National Secretary for Civil Defence, it was indicated that such representatives are to be chosen among civil society organizations that have played a significant contribution in the area of civil defence, and cited Caritas as one organization holding such a position. The lack of clarity on the selection process was criticized by some stakeholders,¹⁰⁵ arguing that legislation on the composition of similar bodies in other areas (for example in relation to the environment) is clearer, for example through use of a triple list of names from which a representative is to be selected.

On the other hand, in the recent past, considerable effort has been made in organizing and conducting the first ever National Conference on Civil Defence and Humanitarian Assistance, a nationwide effort in which community associations and the broad civil society took part at all three levels, expressing their views and voting and adopting proposals relating to various issues on civil defence.¹⁰⁶ Although some of the issues were reflected in later legislation, most of them were not, or at least not in the way they were proposed and adopted by the Conference. One issue that was not reflected was the request that civil society organizations should be represented at the CONDEC in the same number as the sum of all other representatives, so as to keep a balance of votes. As it is reflected in the current legislation, civil society organizations are represented in this body, but they hold only 3 out of 17 seats.¹⁰⁷

Regarding community participation in the development of disaster related plans, there is no such reference in the legislation, and stakeholders did not identify this absence as being either positive or negative.

Community organizations

The current legislation on civil defence refers to community organizations only to a limited extent, assigning to them three seats in the consultative body already referred to, the CONDEC.¹⁰⁸ Previous legislation on the matter referred with a certain level of detail to NUDECs, namely community clusters meant to be set up in advance of a disaster, which should receive training in order to be prepared to act in collaboration with public authorities (especially at municipal level) in the preparation of communities on how to proceed in case of disasters.¹⁰⁹ During the mission, some stakeholders pointed to the establishment of NUDECs in certain localities in the country, noting that some

¹⁰⁵ Conversation with representatives of civil society organization ADARB, COMDEC-Florianópolis and MCT.

¹⁰⁶ For more information on the 1st National Conference on Civil Defence and Humanitarian Assistance, see its official website, which also contains document with all deliberations adopted by the conference for download, <http://www.conferenciadefesacivil.org/a-conferencia>, visited 21 April 2011.

¹⁰⁷ See article 6 of Federal Decree no. 7,257, of 04 August 2010.

¹⁰⁸ See Decree 7,257/2010, article 6, §2 (III).

¹⁰⁹ See Decree 5,376/2005, article 14.

of them are reputedly very active – such as, for example, the NUDEC of Jaboatão dos Guararapes, in the State/Province of Pernambuco.

However, NUDECs are not yet established throughout the country, and in some localities they are completely non-existent or exist only “on paper,” in which case they are often filled with the very same individuals who sit on other community committees covering diverse areas. Thus, although widely established, often such NUDECs do not play an active role in relation to DRR. In the state/province visited (Santa Catarina), it was reported that NUDECs were either not yet established, or if established they played a meaningful role only in the short-term, including in the capital Florianópolis.¹¹⁰

Being aware of such shortcomings, the solution found in Santa Catarina was to undertake capacity building activities on DRR with members of collectives that actually already existed in a variety of localities within that state/province, and which are generally considered as in fact active, namely the CONSEGs — Community Security Councils (Conselhos Comunitários de Segurança). These are community collectives set up at municipal level that bring together representatives of various different neighbourhoods) and closely cooperate with the State/Provincial Secretary of Public Security, mainly on security issues affecting communities. Although CONSEGs focus on public security issues, they were considered to be able to play a meaningful role in relation to DRR and response to disasters once trained and prepared, because in Santa Catarina they are reputed to be quite active and well functioning community-level structures. Hence, in Santa Catarina, training was conducted with over 3.000 CONSEG members throughout the state/province to evaluate risks (either in person or via distance learning modules, organized mainly by the State/Province of Santa Catarina, CD-SC, with the technical support of CEPED-UFSC¹¹¹). To this extent, NUDECs (and, in the case of Santa Catarina, CONSEGs) are trained with the aim of contributing to disaster preparedness of the population they are immediately related to. In general, stakeholders pointed out that the exclusion of a clear reference in the current legislation to the creation and role of NUDECs is a strongly negative development, although one which is expected to be amended by forthcoming legislation which is expected to clearly regulate on such bodies once again.

Furthermore, some stakeholders suggested there was a lack of interest among communities themselves to set up or engage responsibly in NUDECs and further community-based initiatives, pointing out a need for “culture change” in what is considered to be DRR in Brazil. In a way certain initiatives aim to address this challenge by raising awareness and building capacity among journalists and related media professionals. The CD-SC Especially worked upon the idea of the role of the media in DRR, aiming to establish a cooperative network on communication and to improve the role of the media in spreading information on DRR, since it was argued that the Brazilian media tends to play a sensationalist and speculative role in disasters rather than to act as a key player with information disseminating responsibilities.¹¹² There are now some ongoing efforts to record media reports on disasters and to improve capacity building, and also to prepare information material on DRR especially for the media. In this framework, some

¹¹⁰ Conversation with representatives of CEPED-UFSC, COMDEC-Florianópolis, and CD-SC.

¹¹¹ See an example of distance learning activity on DRR for CONSEGs in Santa Catarina, <http://conseg.ceped.ufsc.br/>, visited 21 April 2011.

¹¹² Conversation with representatives of CD-SC.

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publications were produced in Santa Catarina by the CD-SC and CEPED-UFSC,¹¹³ which gathered the views of journalists on disasters that severely affected Santa Catarina in 2008, and which were later followed by general publications on the role of the media in relation to DRR in a partnership between SEDEC and CEPED-UFSC.¹¹⁴

It is also to be noted that many stakeholders suggested that the adoption of legislation on DRR would not necessarily make things change (especially at the community level), since sometimes legislation is adopted with little impact on the ground. What seems to be widely regarded as best practice is the embracing of awareness raising campaigns and local initiatives, engaging directly with communities and working on the issues together with them.

Regarding the Brazil Red Cross Society, in interviews with certain stakeholders it was said that although there is no legislation regulating its collaboration with the government, there were ongoing talks and negotiation towards closer collaboration.¹¹⁵ Other stakeholders expressed their keen interest in collaborating with the Red Cross Movement, which plays a key role in the field of disaster prevention at the international level, and argued that Brazil as a whole has much to benefit from such collaboration.¹¹⁶

Community incentives

As referred to elsewhere in this report, some stakeholders suggested that disaster-related building codes were not a major issue in Brazil, since the risk of earthquakes is not as high as in other countries, but that the main issue in Brazil is the location of buildings, to be defined in a Master Plan.¹¹⁷ Nevertheless, it was pointed out that there are some regulations on retrofitting key buildings, notably health units, in order to make them safer and more resilient to disasters.¹¹⁸ When this is not considered feasible, efforts are often made to move/build health units to/in safe areas (out of the zone of disaster risk). However, the main challenge seems to be how to do so and at the same time continue offering services to those most in need, namely the poor sector of the population who largely remain living in disaster prone areas.

As a general rule, municipal authorities are those in charge of enforcing such rules, especially their secretariats of building and construction. An additional overseeing mechanism is conducted by some professional organizations established at state/provincial level (called CREAs - Council of Engineering, Architecture and Agronomy), which have the role of overseeing the execution of works and services related to construction sites, namely making sure they follow the terms of a project designed by qualified professionals in the areas of engineering, architecture and related fields.

¹¹³ The two main publications on this regard by the DC-SC are Zenatti, A. and Sousa, S. (org.), 'Relatos de Um Desastre – Narrativas Jornalísticas da Tragédia de 2008 em Santa Catarina' (2009), and Zenatti, A., and Sousa, S. (org.), 'Comunicação em Desastres – A Atuação da Imprensa e o Papel da Assessoria Governamental' (2010). See information of such publications at http://www.defesacivil.sc.gov.br/index.php?option=com_content&task=view&id=704&Itemid=262, and http://www.defesacivil.sc.gov.br/index.php?option=com_content&task=view&id=964&Itemid=262, visited 21 April 2011.

¹¹⁴ See course material for the media named 'Comunicação de Riscos e de Desastres' (2010), <http://www.defesacivil.gov.br/publicacoes/publicacoes/comunicacao.asp>, visited 21 April 2011.

¹¹⁵ Conversation with SEDEC representatives.

¹¹⁶ Conversation with CEPED-UFSC representatives.

¹¹⁷ Conversation with MoC representatives.

¹¹⁸ Conversation with MoH representatives.

It seems, however, that enforcement of building codes remains a challenge throughout the country, especially in areas occupied by poor sections of the population who often have no alternative other than to occupy idle land and build makeshift tents and further precarious housing.

Regarding the poor sector of the population, in particular since the adoption of the Statute of the City (Law 10,257/2001, combined with the establishment of the Ministry of Cities in 2003), the main development is that Master Plans or municipal legislation must delimit certain areas as Special Social Interest Zones (ZEIS – Zonas Especiais de Interesse Social). In those areas, the enforcement of the Master Plan and Building Codes must acknowledge that houses in such areas built without regard to prior legislation must be “legalized” and kept as far as possible in the same area (in case of homes located in disaster risk areas, once the risk is mitigated or eliminated, especially due to certain structural interventions, such as engineering works to contain slopes and reduce the risk of landslides, etc.). According to this statute and related policies, summary and/or forced **evictions** should be the very last resort, and used only if there is no other option to eliminate or mitigate risks, or overcrowding, etc. In this case, attention should be given to trying to keep communities close to where they used to live, so as not to disrupt their family and social ties, nor their access to basic services (such as schools, health centres, transport network, etc.) or place of work.

One example of such an area is the Morro do Maciço em Florianópolis, which was, by municipal law, defined as ZEIS.¹¹⁹ One of the advantages of the new system is that it covers areas that did not benefit from public policies on housing, since the great majority of them set the legality of settlements as a condition for eligibility (if they were built according to the law, especially regarding their location). Similarly, in earlier public initiatives and programs, in order for individuals/families to benefit from water and sanitation/sewage networks, houses had to measure at least 30 square metres, which is not the case in most makeshift houses located in typical slums. Thus, areas occupied by the poor often presented open-air sewage, which, besides increasing the risk of the spread of diseases, can over the years increase soil erosion and thus the risk of landslides.¹²⁰ Since the adoption of the Statute of the City, such areas erected in disregard of previous laws can be eligible to receive federal funds once they are recognized as ZEIS by municipal authorities. Those authorities must draft and submit a project for public intervention in such areas (engineering works, relocation of families, building of new houses, etc., according to the situation on the ground).

During the visit to the community of Morro da Penitenciária (part of the Morro do Maciço), the researcher was informed that federal funds were sent to this ZEIS via the federal initiative named “Program to Speed-up Growth” (PAC – Programa de Aceleração

¹¹⁹ See Complementary (municipal) Law 207/2005, of 20 December 2005 and Complementary (municipal) Law of 277, of 28 March 2007.

¹²⁰ Conversation with representatives of the Municipality of Florianópolis.

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do Crescimento).¹²¹ The urbanization project addressing the Morro do Maciço counts on the support of the three levels of government. Thus, the state/provincial government is in charge of setting up the sanitation network (sewage, collection of rain waters, etc.), as well as putting in place a drainage system, and opening and/or paving of streets within the area (most of the existing streets – in slums in general, and thus also at the community living at the Penitentiary Hill - are very small and tight, and thus the intervention considered advisable was to divide existing passages into staircases and ramps for motorbikes, and paving them). Also, some panels along mud-earth protection walls were painted by the community, in an attempt to bring the community together and foster them to depict their views, while increasing their own sense of worth as individuals and community through artistic expression. About 30,000 persons currently live in the Morro do Maciço, and through the program 438 houses are expected to be built, primarily for those located in disaster risk areas.

Another project set up in the Morro do Maciço was a partnership between municipal firefighters (supported by state/provincial firefighters, which are an entity independent from the province military police) and the local community and community brigade, in which 80 children and adults were trained on fire fighting and related issues.

Furthermore, the researcher was informed that, in relation to the Morro do Maciço, the local municipal government pays an emergency rent for families who are removed from areas considered to be of high level risk and who are relocated to other parts of the hill to safer houses. Such assistance is offered until a more permanent solution is found for the relocated families (either via building of new houses, for families originally living in areas in which it is not possible to mitigate risk or which are not suitable for human occupation, or through the improvement of former disaster prone areas by means of engineering works). It is planned to build houses that range from 1-3 bedrooms, with floor areas of 47-60 m², depending primarily on the size of the family. It was further reported that a cable railway was planned in order to facilitate the transport of elderly and other individuals with limited mobility. In addition, there are plans to enhance tourism, especially to the remaining part of Atlantic forest located on the top of the hill (combined with the goal of setting in place income generating activities, such as the training and hiring of community members as tourist guides), an area which was defined as protected area for environmental conservation purposes. The overall goal is to convert such hill top area into a municipal park.

Incentives for communities to reduce disaster risks as such were not clearly identified during the study. Although certain initiatives on awareness-raising suggested that it is in the communities' own interests to be aware of the risks affecting their lives, so far, few initiatives encourage communities to monitor the actions of family members and/or neighbours in case they act in a way against such a common goal (for example,

¹²¹ This is a Lula government initiative aimed to significantly increase public investments in infrastructure (about R\$ 503.9 billion was assigned to transportation, energy, sanitation, housing and water resources). The program's main idea is that the expansion of investment in infrastructure is a fundamental condition for the acceleration of sustainable development in Brazil. Thus, it aims to overcome bottlenecks in the economy and to stimulate increased productivity and to reduce regional and social inequalities. The set of investments is organized into three main areas, namely, logistical infrastructure (involving the construction and expansion of highways, railways, ports, airports and waterways); energy Infrastructure (representing generation and transmission of electric power, production, exploration and transportation of oil, natural gas and renewable fuels), and Social and Urban Infrastructure (covering sanitation, housing, subways, commuter trains and the universality of the 'Light for All' program and water resources). PAC 1 was followed by PAC 2 and similar main policies continued, with certain adjustments and expansion to further areas.

by throwing garbage on to idle land, cutting down trees which help to keep the stability of slopes, etc.). However, one example of such an initiative was the project “Risk Perception” (Percepção do Risco), already referred to above. Beyond being conducted in more than 90 public schools throughout the Province/State of Santa Catarina, it also conducted capacity building activities for more than 40 community leaders, including those of Morro do Maciço. This was undertaken largely in 2008, when community members themselves were mobilized and thus took part in the exercise of mapping disaster risk areas on the hill where they live. Additionally, community leaders helped to organize a taskforce with the aim of collecting garbage thrown away by the local population over the years in the area (about 10 tonnes of garbage were collected).¹²² The project was a partnership between the Civil Defence of the Santa Catarina State, the Municipality of Florianópolis, and CEPED-SC. The project raised awareness of the community and its positive impact was evident immediately after it had ended. It was reported that, just after the end of the awareness raising campaign and joint work for cleaning up of common areas, the community was better prepared to deal with heavy rains that fell in the area in 2008. A new edition of the project is planned to take place in the near future. Furthermore, the project included a program regarding garbage and solid waste, setting places and timetable for collection. The whole project for the Morro do Maciço cost about R\$ 70 million (for structural and non-structural measures), in partnership with the three governmental levels (the federal level financing about R\$ 40 million – allocated from its normal budget and funds assigned via PAC program, the provincial level financing about R\$ 15 million, and the municipal government financing about R\$ 15 million).¹²³

It was also reported during the visit to the Morro da Penitenciária (Morro do Maciço) in Florianópolis that, although the local municipality tries to engage the local community in paid work aiming to carry out structural improvements on that hill, it is very difficult to find local people willing to join the scheme. It was argued that this is the case because the construction sector in the municipality is currently hiring lots of people and offering good payment, and therefore construction workers who happen to live in the Morro da Penitenciária do not find it attractive to work in the government scheme, preferring to work elsewhere and earn more money instead.¹²⁴ Moreover, it was suggested that it is very difficult to carry out projects in densely populated slum areas located on hills, since normally there are none or very few roads large enough for trucks or even cars to ride, the usual situation being that only motorbikes are able to ride in such tight roads, and thus trucks have to leave the construction materials (bricks, cement, tools, etc.) at the foot of the hill, so that from there onwards it has to be carried uphill by construction workers. Nevertheless, when constructing in communities, municipal authorities have to set up a “Managing Committee” (Comitê Gestor), which is meant to follow up the development of works and which is dissolved after the completion of works. This follows the logic of the Statute of the Cities, and its main aim of fostering community participation.¹²⁵

In relation to civil defence actions, notably courses of awareness raising and capacity building offered especially by SEDEC, it was pointed out that, in order to benefit from the federal budget and thus organize such courses, the municipality has to prove it has established a COMDEC, and thus a local municipal structure in charge of activities

¹²² Conversation with representatives of the Municipality of Florianópolis, and of CEPED-UFSC.

¹²³ Conversation with representatives of the Municipality of Florianópolis.

¹²⁴ Conversation with representatives of the Municipality of Florianópolis.

¹²⁵ Conversation with representatives of the Municipality of Florianópolis.

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of civil defence.¹²⁶ This could be regarded as an “incentive” for municipalities to join the national system of civil defence, especially in order to have access to prevention initiatives and training activities.

Mandatory **insurance** schemes do not seem to exist in relation to DRR. Nevertheless, reference was made to one particular benefit covering disasters affecting familiar agriculture, which was reputed by different stakeholders to be a considerable success. It is named “Emergency Action” (Ação Emergencial) set by Decree 6,910 of 22 July 2009, covering, for example, small-scale farmers hit exceptionally hard by floods and droughts. What the scheme does is basically to partially or totally pay off debts previously contracted by small farmers who benefited from a federal government credit scheme that supports familiar agriculture (the National Program for Strengthening of Family Agriculture/PRONAF – Programa Nacional de Fortalecimento da Agricultura Familiar). There is another related insurance scheme for family-based agriculture, called Family Farming Insurance (SEAF - Seguro da Agricultura Familiar). Similarly, this scheme covers cases of natural events that cause the loss of harvest, namely, excessive rain, frost, hail, drought, excessive temperature variation, strong wind and cold winds, among other events. In the scheme, family-based farmers may additionally receive 65 per cent of their initial expected net income before it was destroyed by natural events.

There is a third similar insurance scheme for family-based agriculture established for the Northeast region, covering incidences of drought or excess of rain. The scheme is named “Crop Guarantee” (Garantia-Safra) and aims to foster familiar agriculture in the region. There is a fund backing this scheme to which beneficiaries and public administration at all three levels contribute as follows: beneficiary farmers contribute 1 per cent, municipalities 3 per cent, state/provincial government 6 per cent and the Union 20 per cent. It was reported that in Brazil about 500,000 families benefit from the various different small family-based agriculture public insurance schemes.¹²⁷

Community empowerment

In relation to the question of whether the law articulates any rights of citizens with respect to DRR, it seems there is no such precise legislation covering the issue. Nevertheless it was pointed out by some stakeholders that individuals who were affected by disasters may be able to withdraw social taxes that were collected throughout their working life under the “Guarantee Fund for Time of Service” (FGTS – Fundo de Garantia do Tempo de Serviço) in order to rebuild their homes.¹²⁸ Normally, access to the FGTS is only possible once a worker has reached the retirement age. However, although the possibility represents good news for individuals affected by disasters, it can hardly be seen as a legal remedy as such. The most obvious legal remedy for individuals affected by disasters could be an ordinary action seeking financial compensation for eventual damage suffered (ação ordinária por indenização de danos), provided it can be proven there were clear legal obligations assigned to persons which were breached by the respondent(s).

What should also be pointed out as a possible legal remedy to be used in situations involving DRR is the filing of legal suits similar to class actions (ACP - Ação Civil

¹²⁶ See article 1, Ordinance 912-A, of 29 May 2008, of the MNI.

¹²⁷ Conversation with MDA representatives.

¹²⁸ Conversation with SEDEC representatives.

Pública).¹²⁹ These are filed directly by certain NGOs and other entities, or, as is normally the case, by the Prosecutorial Office (Ministério Público) or by the Public Defender (Defensoria Pública) and aim to protect diffuse and collective interests such as in relation to the protection of the environment or urban order. They cover prevention of damage and reparations in cases of damage already occurred. During the research for this report, it was not possible to verify whether or not such actions have been filed in relation to DRR issues, though there were indications of some ongoing administrative investigatory proceedings (which normally precede the filing of an ACP) regarding the enforcement of civil defence law (especially on the duty of municipalities to set up COMDECs).¹³⁰ However, it was also suggested that, although the filing of actions can be considered as an instrument to put pressure on local administrations which are lagging behind the observance of legal obligations assigned to them, the ‘judicialization’ of conflicts should not be regarded as a real panacea, since it is rather lengthy and slow. Thus, it was suggested that perhaps extra-judicial alternatives, such as an increase of political and social pressure, should also be considered, as well as improved media coverage of municipal authorities considered to be at fault.¹³¹

A further complementary legal action that could be considered in relation to DRR is the “people’s legal action” (ação popular) referred to in the 1988 Constitution.¹³² This procedure allows citizens to file a people’s legal action with a view to nullifying an act injurious to, among others issues, the environment.

There was also an indication that there is a draft law which provides precisely for the responsibility of mayors who do not undertake preventive measures to prevent disasters occurring. However, it seems that its approval is some way off, since it is still to be debated before it can be adopted by the federal parliament and thus become legally binding legislation.¹³³

There can be no doubt that the dearth of legal remedies (and/or the difficulties of access to them) is regarded as problematic, especially by community-based stakeholders. This could be perceived in the interviews with certain such stakeholders,¹³⁴ who indicated that it is frustrating not to be able to force authorities to act regarding prevention of further occurrences of disaster in a fragile region such as the Vale do Baú, despite the fact that they have received money to do so. Moreover, other stakeholders suggested that, based on media coverage at least, it seems there have been few if any findings on the responsibilities of authorities in relation to disasters which have occurred in Brazil recently.¹³⁵ Thus, although there are some possible legal remedies that could in theory be used in relation to DRR issues, they have not been widely used in relation to this matter so far. Also, it is to be noted that class actions can only be used in order to ask for the enforcement of clear legal obligations to do or abstain from doing something. Since legislation related to DRR is often vague and confusing, especially civil defence legislation assigning obligations to different public entities, this may also have a negative impact on the filing of legal remedies on the subject.

¹²⁹ Law 7,347, of 24 July 1985.

¹³⁰ Conversation with MPE-SC representatives.

¹³¹ Conversation with MPE-SC representatives.

¹³² See 1988 Constitution, article 5, LXXIII.

¹³³ Consultation with MCT and SEDEC representatives.

¹³⁴ Namely, representatives of the community association ADARB.

¹³⁵ Conversation with UNDP representatives.

Unique or notable aspects of existing DRR legislation

Among the positive developments cited by different stakeholders were the Statute of the Cities¹³⁶ and the establishment of the Ministry of Cities, which are widely regarded as concrete efforts to improve the living conditions of millions of socially excluded citizens. The social debt the country has vis-à-vis its poor is largely being addressed via this framework. It seems that these changes in the country's housing policy are working fairly well in certain municipalities, especially those which have the expertise to produce a suitable proposal for intervention regarding reduction of risks. Most stakeholders who referred to the Statute of the Cities suggested that this could be considered as a positive step and represented landmark legislation adopted by Brazil, which could be regarded as a **model** to inspire other countries.

However, one has to take into account that although the legislation by itself can be considered a landmark, as observed by certain partners, it was the legislation combined with a strong governmental program (the PAC, especially with the emphasis on the right to housing and urbanism) that together should be considered as the key to the success regarding the implementation of public policies at all levels of the government. Thus, a carefully drafted legislative framework, combined with public programs and the financial means for their implementation, was considered by many stakeholders as the greatest positive development concerning populations living in risk areas, especially in urban regions.

One such example was the community of the Maciço do Morro da Cruz, which benefited from the implementation of this legislation, combined with the financial support from PAC with emphasis on housing and urban policies. In that community, public policy related to DRR is being implemented with joint efforts from all governmental levels, through structural and non-structural actions.

Some stakeholders pointed out that a positive point is that, despite the continental size of the country, it was possible to set up a national integrated system to deal with civil defence, which was *per se* a landmark achievement. Nevertheless, the organization and effective functioning of the system remain to be improved.¹³⁷

However, a certain concern was flagged up by other stakeholders regarding the model pursued in the country in relation to its rural population, which often lags behind as second class citizens, due to the inadequate provision of basic services (especially medical services and education), combined with the lack of working prospects. These elements combined led to the widespread migration of the rural population to urban areas, even though here they often live under poorer conditions than those they had left behind in their original homes. Thus, it is not unusual that rural families with reasonably fair housing in the countryside end up moving to cities, often to risk areas (living in overcrowded slums on the top of hills in urban centres), in order to have access to more and better services than those they would have access to back home, as well as improved employment prospects.¹³⁸

Regarding the **impetus for recent legislative development**, it was pointed out by some stakeholders that legislative changes followed recent disasters in Brazil (in Pernambuco, in Alagoas, in Maranhão, in Rio de Janeiro, etc.), and this should be one of the reasons

¹³⁶ Law 10,257, of 10 July 2001.

¹³⁷ Conversation with SEDEC representatives.

¹³⁸ Conversation with representatives of the Municipality of Florianópolis (SMHA). Similar idea can also be found in the documentary already referred to – 'Percepção do Risco'.

why legislation on the civil defence system was hastily drafted and passed, and the content of which has been widely criticized as confusing and confused. Stakeholders also generally suggested that Brazil is seeking to follow international efforts on DRR, notably the Hyogo Framework, and also the international campaign for more resilient cities (at least in Santa Catarina, in which on 14 April 2011 six municipalities reportedly expressed their interest in joining the initiative).¹³⁹ It was also suggested that Brazil should seek to adjust according to international initiatives, which may provide helpful guidance on the subject in the country, especially on legislative issues. Also the adjustment of national legislation and institutions to international initiatives was regarded by some stakeholders not only as providing legitimacy for desired changes, but also as a good way to resolve among different political parties at the three levels of government in Brazil.¹⁴⁰

In relation to developments that were only possible due to legislation, some stakeholders suggested that, due to the holistic view adopted in the country in relation to DRR, it was possible to adopt not only a unique system of civil defence, but also to progressively adopt specific legislation pointing in a favourable direction (with more community participation and better dissemination of information, etc.), such as the Law on Dams (Lei de Barragens).¹⁴¹

¹³⁹ Conversation with CD-SC.

¹⁴⁰ Conversation with Federal Senate representatives.

¹⁴¹ Conversation with SEDEC representatives. The reference made was to Law 12.334/2010.

Analysis of legislation related to disaster risk reduction in Brazil

Chapter 5

Conclusions

There are many laws relating directly or indirectly to DRR, some of them very good, which have been adopted in Brazil. However, as suggested by some stakeholders, while some of them have a clear and important impact, often because they are followed by policy and programs largely financially supported by the federal level, others are simply ignored or openly disregarded, in whole or in part, both by authorities and the general population. The main challenge seems to be how to enforce legislation in Brazil. This applies to legislation in general, including legislation on DRR.

Thus, it was suggested that the mere adoption of legislation is not a solution to problems in Brazil, primarily because of the defective enforcement of and implementation of legislation. Some stakeholders took the view that legislation should be combined with public policies, and even that the latter, could in some cases, serve as an alternative to legislation. However, a possible shortcoming to this approach is that public policies are very much dependent on who is in charge of the government of the day, and thus tend to come to an end once the incumbent government or the political party in power changes. It was also suggested that the average Brazilian politician has little perception of disaster risks, and how they may affect human lives and the development of the area he/she administers, and of the country as a whole.

It seems that the focus regarding disasters in the country largely remains on response rather than prevention. In relation to preventive efforts linked to the right to housing, one has also to note that it would seem nearly impossible to resettle every person who is living in a disaster risk area in Brazil, especially taking into account the existence of large slums conglomerations, such as the “Complexo do Alemão” in Rio de Janeiro. Therefore, what public administrations seems to consider feasible is rather to offer a palliative solution, namely to mitigate risk in such areas.

The adoption of the Statute of Cities and the establishment of the Ministry of Cities are certainly landmark developments in the country in terms of housing, which reflect lengthy popular struggle in this regard. Both address the housing situation in Brazil in a way to improve the notion of citizenship and dignity of those living especially in slum areas. The living conditions of these areas, in which great part of the population live, are slowly being raised and brought ‘to the realm of legality’ through improvement of services (via water distribution, sewage system, electricity, waste collection, etc.), DRR measures (structural and non-structural measures – engineering interventions, awareness raising and capacity building initiatives, respectively) and also, indirectly, people living there are slowly feeling more a part of society as a whole.

Another related topic is the development model currently in place in the country, and the impact it may have on the environment and the increased risk of disaster. The ongoing changes in the Forest Code, with larger areas allowed to be transformed into agricultural land, and the negative impacts for the country as a whole, especially the negative effects on climate change, the increase of less stable land, etc., are still to be taken seriously by legislators and broader society. Although there is a certain level of public mobilization on the subject, it remains to be seen what will be the final text of the law adopted, and the likely impact changes will have. Once again this seems to demonstrate that public institutions are not always consistent in their official discourse and the ensuing practice, especially regarding the idea that DRR concerns should permeate the entire public machinery of the country.

It is further to be noted that there were some indications that the international community (represented especially through the UN) has approached the Brazilian government

Conclusions

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offering support following certain disasters that recently hit the country. However, this assistance was in fact refused and the government emphasized the capacity of Brazil to cope by itself. Nevertheless, with the increase in the number and intensity of disasters, the issue is certain to be addressed once again by the new federal government.¹⁴²

Various stakeholders suggested that the new federal government is highly enthusiastic about and genuinely committed to tackling issues related to disasters, especially DRR, particularly in the wake of recent serious disasters affecting the country's population, for example, the one in the hilly region of Rio de Janeiro. In this sense, it could justifiably be claimed that there are encouraging ongoing initiatives. However, although the official discourse broadcasts a holistic and inter-connected approach regarding different bodies and levels of government, there is still much to be done in this regard, in order to turn words into concrete action, especially in view of the need for community based DRR initiatives.

In relation to communities, it is notable that more and more individuals are being included in public initiatives, especially via public consultation. Thus, it seems there is the resolute intention to involve the population more and more in public issues. However, more should be done to raise the level of the debate and enhance the level of knowledge among the public regarding issues at stake. During consultations with stakeholders, it was also suggested that community groups tend to participate merely out of political interest, with a pre-set opposition agenda seeking to halt progress on implementation of public policies, thus slowing down the speed of implementation of programs. Community-only initiatives were not in evidence during the mission, but again, due to the timeframe and dimension of the country, one cannot necessarily conclude they are absent. Several partners expressed the wish to work together with the Red Cross movement but also highlighted the need to revitalize the national society of the country.

To conclude, there are many positive initiatives in Brazil on DRR and generally on the issue of disasters, at all levels of government. However, much of what is being done is poorly connected, or remains to be effectively implemented.

¹⁴² Conversation with representatives of UNDP and UNFPA.

Annex A

List of people consulted

National Government / Federal Institutions

National Secretary of Civil Defence (Secretaria Nacional da Defesa Civil – SEDEC)/
Ministry of National Integration (Ministério da Integração Nacional)

Mrs. Cristianne da S. Antunes, Chief of Cabinet (Chefe de Gabinete)

Mr. Rafael Schadeck, Department of Disaster Minimization (Departamento de Minimização de Desastres)

Mr. Werneck Carvalho, Department of Disaster Minimization (Departamento de Minimização de Desastres)

National Senate (Senado Federal)

Mr. Antonio Helder M. Rebouças, Director, Presidency, Secretariat of Technical Coordination and Institutional Relations (Director, Presidência, Secretaria de Coordenação Técnica e Relações Institucionais)

Mr. João Henrique Pederiva, Aide, Presidency, Secretariat of Technical Coordination and Institutional Relations (Assessor, Presidência, Secretaria de Coordenação Técnica e Relações Institucionais)

Ministry of Foreign Affairs (Ministério das Relações Exteriores)

Minister Milton Rondó Filho, General Coordinator of International Actions Against Hunger (Ministro, Coordenador-Geral de Ações Internacionais de Combate à Fome)

Mr. Elter Nehemias Santos Barbosa, Secretary, Coordination of International Actions Against Hunger (Secretário, Coordenação-Geral de Ações Internacionais de Combate à Fome)

Ministry of Health (Ministério da Saúde)

Mrs. Aline Albuquerque Sant'ana de Oliveira, Federal Attorney, Coordinator of Legislation and Rules, Legal Consultant of the Ministry of Health (Advogada da União, Coordenadora de Legislação e Normas, Consultoria Jurídica do Ministério da Saúde)

Mrs. Eliane Lima e Silva, Consultant, General Coordination for Environmental Health Surveillance (CGVAM - Coordenação Geral de Vigilância em Saúde Ambiental), Department of Environmental Health Surveillance and Occupational Health (DSAST - Departamento de Vigilância em Saúde Ambiental e Saúde do Trabalhador), Secretariat of Health Surveillance (SVS - Secretaria de Vigilância em Saúde (SVS))

Ministry of the Environment (Ministério do Meio Ambiente)

Mr. Robson José Calixto de Lima, Aide, Cabinet of the Minister of the Environment (Assessor do Gabinete do Ministro)

Annex A

Mr. Wanius de Morim, Aide Firefighting specialist, Cabinet of the Minister of the Environment (Assessor especialista em combate a incêndio, Gabinete do Ministro)

Ministério Público Federal (Federal Prosecutorial Office), Attorney General's Office (Procuradoria Geral da República)

Gilda Pereira de Carvalho, Deputy Attorney General (Subprocuradora-Geral da República), Federal Attorney for Citizens' Rights (Procuradora Federal dos Direitos do Cidadão)

Cabinet of Institutional Security, Presidency of the Republic (Gabinete de Segurança Institucional, Presidência da República – GSI/PR)

Ministro J.A. de Macedo Soares, Assistant Secretary of the Department of Institutional Studies and Monitoring, (Secretário Adjunto da Secretaria de Acompanhamento e Estudos Institucionais)

Ministry of Agrarian Development (Ministério do Desenvolvimento Agrário)

Mr. Guilherme Brady, International Advisor, Specialist in Public Policies and Management, International Advice and Commercial Promotion (Assessor Internacional, Especialista em Políticas Públicas e Gestão Governamental, Assessoria Internacional e de Promoção Comercial).

Mr. Francesco Maria Pierri

Mr. Luciano Moura

Mrs. Rocilda S. Moreira

Mr. Mauro Del Grossi

Ministry of Cities (Ministério das Cidades)

Mrs. Inês Magalhães, National Secretary of Housing, National Secretariat for Housing (Secretária Nacional de Habitação, Secretaria Nacional de Habitação)

Mr. Daniel Montandon, Director of Urban Planning, Department of Urban Planning (Diretor de Planejamento Urbano, Departamento de Planejamento Urbano)

Mrs. Aline Albuquerque, Architect, Department of Institutional Development and Technical Cooperation (Arquiteta, Departamento de Desenvolvimento Institucional e Cooperação Técnica)

Mr. Lucas Vilas Boas, Infrastructure Analyst, Department of Institutional Development and Technical Cooperation (Analista de Infraestrutura, Departamento de Desenvolvimento Institucional e Cooperação Técnica)

Ministry of Science and Technology (Ministério da Ciência e Tecnologia)

Mr. Jorge Messias, Legal Consultant (Consultor Jurídico)

Mrs. Lídia Miranda de Lima, Coordinator of Regulatory Studies and Legal Reports (Coordenadora de Estudos Normativos e Pareceres)

Mr. Antônio Marcos Mendonça, Analyst in Science and Technology, Secretariat of Policies and Programs on Research and Development (Analista em Ciência e Tecnologia, Secretaria de Políticas e Programas de Pesquisas e Desenvolvimento – SEPED/MCT)

United Nations

UNICEF-United Nations Children's Fund (UNICEF – Fundo das Nações Unidas para a Infância)

Mrs. Michelle Barron, Protection Officer (Responsável pela Proteção)

UNDP-United Nations Development Programme (PNUD – Programa das Nações Unidas para o Desenvolvimento)

Mrs. Maristela Baioni, Assistant Resident Representative for Programme (Representante Residente Assistente de Programa)

UNFPA - United Nations Population Fund (Fundo de População das Nações Unidas)

Mr. Marcelo Britto, Programme Assistant (Assistente de Programa)

Provincial/Regional level

State/Province of Santa Catarina - Estado de Santa Catarina

Regional Prosecutorial Office (Ministério Público do Estado de Santa Catarina)

Mr. Luiz Fernando Góes Ulysséa, Prosecutor, General Coordinator of the Center for Operational Support of Citizenship and Foundations (Promotor de Justiça, Coordenador-Geral do Centro de Apoio Operacional da Cidadania e Fundações)

Regional Department of Civil Defence/Santa Catarina – CD/SC (Departamento Estadual de Defesa Civil – DEDC/SC)

Major Márcio Luiz Alves, State/Provincial Director of Civil Defense in the State of Santa Catarina (Diretor Estadual de Defesa Civil no Estado de Santa Catarina)

Mrs. Fabiane Pickusch Costa, Press Officer (Assessora de Imprensa)

Municipal level

Municipality of Florianópolis

Coordination Office of the Municipal Civil Defense – COMDEC (Coordenadoria Municipal de Defesa Civil da Cidade de Florianópolis)

Mr. Luiz Eduardo Machado, Coordinator, Service Manager of the Civil Defence (Coordenador, Gerente de Atendimento da Defesa Civil)

Municipal Secretariat of Housing and Environmental Sanitation – City of Florianópolis (Secretaria Municipal de Habitação e Saneamento Ambiental – Cidade de Florianópolis)

Mrs. Kelly Cristina Vieira, Special Projects Manager (Gerente de Projetos Especiais)

Mrs. Maria Aparecida Napoleão Catarina, Social Assistant (Assistente Social)

Municipality of Ilhota

Municipal Prefecture of Ilhota, Reference Center for Social Assistance, Social Assistance Secretariat of the Municipality of Ilhota (Prefeitura Municipal de Ilhota, Centro de Referência de Assistência Social, Secretaria de Assistência Social do Município de Ilhota)

Mrs. Rosi Voltolini, Social Assistant (Assistente Social)

Annex A

Academic sector

University Centre on Disaster Studies and Research - Federal University of Santa Catarina (Centro Universitário de Estudos e Pesquisas sobre Desastres – CEPED, Universidade Federal de Santa Catarina - UFSC)

Professor Antônio Edésio Jungles, General Director (Professor, Diretor Geral)

Mr. Pedro Paulo Souza, Administrative Consultant (Consultor Administrativo)

Mrs. Janaína Rocha Furtado, Researcher (Pesquisadora)

Mrs. Rita Dutra, Sociologist (Socióloga)

Civil society organisations

Association of Displaced and Affected of the Baús Region - ADARB (Associação dos Desabrigados e Atingidos da Região dos Baús)

Mrs. Tatiana Richart Reichert, President (Presidente)

Association of Residents of the Penitentiary Hill, Maciço Hill, Florianópolis (Associação dos Moradores do Morro da Penitenciária, Morro do Maciço, Florianópolis)

Mr. Clair Correa de Jesus, President (Presidente)

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Annex C

Selected Brazilian legislation relevant to DRR

Federal Legislation

Most part of Federal Legislation can be found on the official website of the Presidency of the Republic, under <http://www4.planalto.gov.br/legislacao>, visited 24 April 2011. The list below is made taking mostly into account the relevance of legislation to the subject matter of the current study, rather than the hierarchy among legal texts.

1998 Federal Constitution, Federal Republic of Brazil, with constitutional amendments no. 1-67.

Disaster Risk Management

Law 12,340, of 1 December 2010. Regulates the National System of Civil Defence - SINDEC, the transfer of funds for relief efforts, victims' assistance, resettlement of essential services, reconstruction of areas affected by disasters and the Special Fund for Public Calamities.

Provisional Measure 494, of 2 July 2010. Similar as Law 12,340, of 1 December 2010.

Decree 7,257, of 4 August 2010. Regulates the National System of Civil Defence - SINDEC on the recognition of situation of emergency and state of public calamity, on the transfer of funds for relief efforts, victims' assistance, resettlement of essential services and reconstruction of areas affected by disaster.

Decree 5,376, of 17 February 2005. Regulates the National System of Civil Defence – SINDEC, the National Council of Civil Defence, and gives other measures.

Provisional Measure 522, of 12 January 2011. Opens extraordinary credit in favour of the Ministries of Transport and National Integration in the overall value of R \$ 780,000,000.00, for the purposes specified therein.

Law 12,334, of 20 September 2010. Establishes the National Policy for Dam Safety for the accumulation of water for all purposes, the temporary or final disposal of waste and the accumulation of industrial waste, and creates the National System Safety of Dams.

Decree 1,080, of 8 March 1994. Regulates the Trust Fund for Public Calamities (FUNCAP) and gives other measures.

Ordinance 912-A, of 29 May 2008 (of the Ministry of National Integration). Indicates that in order for municipalities to qualify for transfer of federal funds assigned for civil defence actions they must prove the existence and functioning of the Coordination Office of the Municipal Civil Defence - COMDEC.

Law 9,077, of 10 July 1995. Authorizes the Executive to use government food stocks to fight hunger and poverty.

Policy document. National Policy of Civil Defence, adopted in CONDEC's resolution n. 2, of 12 December 1994.

Building and Construction and Urban Land Use Planning

Law 10,257 of 10 July 2001. Statute of the City. Regulates arts. 182 and 183 of the 1998 Federal Constitution, establishes general guidelines for urban policy and other related measures.

Law 11,124 of 16 June 2005. Provides for the National System for Housing of Special Social Interest, the National Fund for Housing of Special Social Interest and the Management Council.

Decree 5,796 of 6 June 2006. Regulates Law 11.124 of 16 June 2005.

Law 11,888 of 24 December 2008. Assures for low income families public free assistance for the design and construction of housing of social interest.

Law 11,977 of 7 July 2009. Provides for the program 'My House, My Life' and regularization of settlements located in urban areas.

Law 6,766 of 19 December 1979. Provides for the parcelling of urban land and other related measures.

Decree-Law 3,365 of 21 June 1941. Provides for expropriation for public purposes.

Law 4,132 of 10 September 1962. Provides for expropriation for social interest.

Environment, Forest, Water Catchment and River Management

Decree 2,652, of 1 July 1998. Promulgates the United Nations Framework Convention on Climate Change.

Law 4,771 of 15 September 1965. Forest Code.

Law 12,187 of 29 December 2009. National Policy on Climate Change.

Law 9,795 of 25 April 1999. National Environmental Education Policy.

Law 6,938 of 31 August 1981. National Environmental Policy.

Law 7,661 of 16 May 1988. Establishing the National Plan of Coastal Management.

Law 9,433 of 8 January 1997. National Water Resources Policy.

Law 11,445 of 5 January 2007. Law on Basic Sanitation.

Law 9,605 of 12 February 1998. Environmental Crimes Law.

Law 11,284 of 2 March 2006. Provides for the management of public forests for sustainable production, establishing, in the structure of the Ministry of Environment, the Brazilian Forest Service, and creates the National Fund for Forestry Development.

Law 12,305 of 2 August 2010. Establishes the National Policy on Solid Waste.

Decree 7,404 of 23 December 2010. Regulates Law 12,305, of 2 August 2010, on the National Policy on Solid Waste.

Decree 24,643 of 10 July 1934. Establishes the Water Code.

Annex C

Legislation on nuclear issues

Decree-Law 1,809 of 7 October 1980. Establishes the Protection System regarding the Brazilian Nuclear Program.

Decree 2,210 of 22 April 1997. Regulates Decree-Law 1.809 of 7 October 1980, which established the Protection System regarding the Brazilian Nuclear Program.

Law 10,308 of 20 November 2001. Provides for site selection, construction, licensing, operation, inspection, costs, compensation, the liability and security for deposits of radioactive wastes, and other measures.

Law 6,453 of 17 October 1977. Provides for civil liability for nuclear damages and criminal liability for acts related to nuclear activities and other measures.

Law 4,118, of 27 August 1962. Provides for the National Policy on Nuclear Energy, creates the National Commission of Nuclear Energy, among other measures.

Ordinance GSI/PR 8, of 24 March 2011. Provides for the activities of the Planning Committee for Response to Nuclear Emergencies in the Municipality of Angra dos Reis.

Recognition and Regulation of NGOs and volunteering

Law 9,790 of 23 March 1999. Provides for the qualification of not-for-profit legal persons under private law as Civil Society Organizations of Public Interest.

Law 9,608 of 18 February 1998. Provides for the voluntary service and other matters.

Further legislation

Decree 6,910 of 22 July 2009. Provides for emergency action to be taken by the Ministry of Agrarian Development in cases that specifies, among other provisions.

Regional/Provincial Legislation

Some Regional/Provincial Legislation can be found through the official website of the Presidency of the Republic <http://www4.planalto.gov.br/legislacao> . An alternative is to visit the official documental website of the Parliament of Santa Catarina, under <http://200.192.66.20/ALESC/PesquisaDocumentos.asp> , visited 24 April 2011.

1989 State/Provincial Constitution of Santa Catarina.

Law 10,925 of 22 September 1998. Provides for the State/Provincial System of Civil Defence, on the State/Provincial Fund State Civil Defence and provides other measures.

Decree 3,570 of 22 September 1998. Regulates the State/Provincial System of Civil Defence.

Municipal Legislation

A great amount of municipal legislation can be found via the non-official website <http://www.leismunicipais.com.br/> , visited 24 April 2011.

Law 1,178, of 12 November 1973. Creates in the Municipality of Florianópolis the Coordination Office of the Municipal Civil Defence - COMDEC.

Complementary Law 60, of 11 May 2000. Establishes the Building Code for the Municipality of Florianópolis and regulates on further measures.

Complementary Law 207, of 20 December 2005. Amending in urgent character the Director Plan in relation to the Morro do Maciço and provides other measures.

Complementary Law 277, of 28 March 2007. Amends article 4 of Complementary Law 207, of 20 December 2005.

The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity / The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality / It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality / In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence / The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service / It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity / There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality / The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.



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