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COMMUNICABILITY BETWEEN THE NATIONAL, STATE AND MUNICIPAL GOVERNMENTS IN THE INTEGRATION OF THE PRINCIPLES OF THE HYOGO FRAMEWORK FOR ACTIONS TO REDUCE RISKS AND DISASTERS

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List of Abbreviations

ANA - Agência Nacional de Água [National Water Agency]
CCDC-ES – Comitê Estadual de Defesa Civil-Espírito Santo [Espirito Santo Civil Defense Committee]
CEMADEN – Centro Nacional de Monitoramento e Alertas de Desastres Naturais [National Center for Natural Disaster Monitoring and Warning]
CENAD – Centro Nacional de Gerenciamento de Riscos e Desastres [National Center for Risk and Disaster Management]
CMDC-VV – Coordenadoria Municipal da Defesa Civil-Vila Velha [Municipal Civil Defense Coordinator of Vila Velha]
COREDEC – Coordenadoria Regional de Defesa Civil [Regional Civil Defense Coordinator]
COMDEC – Coordenadoria Municipal de Defesa Civil [Municipal Civil Defense Coordinator]
HFA – Hyogo Framework for Action
IBGE – Instituto Brasileiro de Geografia e Estatística [Brazilian Institute of Geography and Statistics]
IEMA – Instituto Estadual do Meio Ambiente [State Environmental Institute]
MIN – Ministério da Integração Nacional [Ministry of National Integration]
ONG's – Organizações Não Governamentais [Non-Governmental Organizations]
ONU – Organização das Nações Unidas [The United Nations]
RRD – Redução de Risco de Desastres [Disaster Risk and Reduction]
PEPDEC – Plano Estadual de Proteção e Defesa Civil [State Civil Defense and Protection Plan]
PM-ES – Polícia Militar do Estado do Espírito Santo [Espirito Santo State Military Police]
PMC-VV - Plano Municipal de Contingência de Vila Velha [Municipal Contingency Plan for Vila Velha]
PMVV – Prefeitura Municipal de Vila Velha [Vila Velha Municipal Government]
PNPDEC – Política Nacional de Proteção e Defesa Civil [National Civil Defense and Protection Policy]
PNUD – Programa das Nações Unidas para o Desenvolvimento [United Nations Development Program]
RMGV – Região Metropolitana da Grande Vitória [Greater Vitória Metropolitan Region]
SAE – Secretaria de Assuntos Estratégicos [Secretariat of Strategic Affairs]
SEDEC – Secretaria Nacional de Defesa Civil [National Civil Defense Secretariat]
UFSC - Universidade Federal de Santa Catarina [Federal University at Santa Catarina]
UNISDR – The United Nations Office for Disaster Risk Reduction

Introduction

In various parts of the world, extreme climate events have been observed regularly and with increased intensity and frequency (DILLEY, et.al, 2005; BRAUCH, 2005; CARDONA, 2005; BRAGA, et.al, 2006) causing increased social, economic and environmental losses and aggravating situations of socio-environmental vulnerability (ALVES, et.al, 2010) of populations living in situations of privation caused by the model of economic development and urbanization typical to peripheral areas of industrial capitalism.

Brazil is merely one of the regions that experiences this situation, where intense rains (in the country's tropical and equatorial regions), prolonged drought (typical of the country's Northeast) or of unprecedented tornados (in the Southern part of the country) have often had grave and harmful environmental, social, economic and psychological impacts. Nevertheless, it should be emphasized that the use of urban land in Brazil today, characterized by unplanned and often illegal occupation, does not consider natural situations of risk such as hillsides and river banks, which in conjunction with extreme events threaten entire populations or intensify these threats.

Brazil has experienced a sui generis situation. Its population has benefitted from recent social mobility, thanks to income redistribution programs, and data from the Secretariat of Strategic Affairs (SAE) indicate that "between 2004 and 2010 32 million people rose to the middle classes (known in Brazil as classes A, B and C) and 19.3 million exited poverty."[1] Meanwhile, 6% of the Brazilian population, according to the 2010 census by the Brazilian Institute of Geography and Statistics (IBGE[2]), a total of 11,425,644 people,[3] are located in 3,224,529 private residences that continue to have precarious access to water and sanitation and there is still a high level of informal labor. In 2010, "31.6% of the population of metropolitan regions had income of up to half a minimum wage."[4] The vast majority of these residences (88.6%) are located in 20 metropolitan regions and half, (49.8%) in Brazil's Southeast (IBGE, 2010). The country also has 6,329 substandard or irregular settlements including favelas, invaded areas, communities and palafittes) which are found in 323 of Brazil's 5,565 municipalities. Most of these settlements are located in areas designated by Brazilian environmental law for permanent preservation because they are on hillsides (as those in Rio de Janeiro), ocean beaches or coastal forests known as restinga (as in Fortaleza or Vila Velha), or in permanently flooded areas (as in Macapá and Vila Velha), igarapés [forest waterways] (as in Manaus) or mangroves (as found in Cubatão, Duque de Caxias or Vitoria).

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[1] http://www.sae.gov.br/novaclassemedia/?page_id=58 accessed on 15/11/2013.

[2] http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=2057&id_pagina accessed on 06/05/2013.

[3] 2013 data from the site of the Secretaria de Assuntos Estratégicos [Secretariat for Strategic Affairs] (SAE/Presidência da República) [The Office of the President] indicate that for every 100 residents of substandard settlements in the country, 65 are considered to be part of the new middle class because they have a monthly income of up to R$ 2.600 (http://www.sae.gov.br/site/?p=14913).

[4] http://saladeimprensa.ibge.gov.br/noticias?view=noticia&id=1&idnoticia=2508&busca=1&t=censo-2010-mostra-caracteristicas-territoriais-aglomerados-subnormais-suas-diferencas-demais-areas-cidades Accessed on 15/11/2013.

These populations with precarious conditions of access to basic public services are more exposed to risks due to their high degree of vulnerability. This condition of vulnerability reveals the ethical dimension of climate changes (SACHS, 2008), which requires that authorities take positions and urgently implement actions to reduce the risks of disaster through specific and sectorial public policies. It is the interface of this vulnerability with the occurrence of extreme events that consequently requires the populations to react or confront situations of risk and that presents the state with the challenge of transforming the situation of precariousness and exclusion in which these populations live by implementing sustainable development actions.

A conjunction of climatological, meteorological, geomorphological and social factors are at the origin of the recent catastrophes in Brazil as took place in Santa Catarina in November 2008, or in Alfredo Chaves, Espirito Santo state in December 2012. The mega catastrophe in the mountain region of Rio de Janeiro state in January 2011, in which hundreds of people died and hundreds left missing, however, appears to be an event that forced all of Brazilian society to reconsider civil defense.

At the moment we are ending this communication, heavy rain hits the Espirito Santo State since December 15th. Among the 78 municipalities, 50 are in a state of emergency. More than 40 thousand people homeless or displaced temporarily to shelters and 23 deaths due to landslides and floods. State Civil Defense and those from municipalities are on alert and have the help of the National Force and volunteers in welcoming the victims and in distributing donations and basic goods. National medias announce future national funds for prevention basically engineering works, ignoring, for the moment, vulnerable population awareness on DRR actions.

Historically, the Brazilian state has made advances in relation to disaster risk reduction (DRR), and has recently had as a reference the Hyogo Framework for Action 2005-2015 (UNISDR, 2005) to allow it to respond to the commitment assumed before this international body. Nevertheless, it is important to note that what is now Brazil's civil defense system dates back to World War II, and had been linked to the concept of national security, although this was changed in 1946. Only in the 1960s did Brazil begin to establish regional civil defense agencies, more precisely in Rio de Janeiro state, where regional Civil Defense Coordinators were created, known as COREDEC, as a strategy to deal with the socio-environmental consequences of the intense rains that provoked landslides and floods in the summers of 1966 and 1967 in the country's Southeast.[5] Nationally, in 1964, the Ministry of the Interior was created, which until it was terminated in 1990 had the responsibility of assisting populations harmed by public calamities. In 1992, this ministry came to be called the Ministry of National Integration where the National Civil Defense Secretariat (SEDEC) is now located.

Thus, since the 1960s, the country has been constructing the foundations of its civil defense on the national and state levels which, in 2012, culminated with the National Civil Defense and Protection Policy that sought to respond to the five principles of the Hyogo Framework for Action. Espirito Santo is one of the first states in the country to have a Civil

[5] http://www.mi.gov.br/historico-sedec accessed on 18/11/2013.

Defense and Protection Policy (Decreto [Decree] nº 3.140-R, 30 October 2012).[6] It has been observed that until today this process is related to the need to respond to natural disasters, mainly involving urban populations.

With this background, the purpose of this paper is to examine the civil defense communication process through which national and regional agencies share principles, guidelines and good DRR actions in the medium and small municipalities where disasters have affected mainly vulnerable people. This study is focused on the civil defense systems in Espirito Santo State and the municipality of Vila Velha in that state. It first analyzes the official civil defense discourse and then presents interviews with social actors at the different levels of the civil defense system.

The municipality of Vila Velha, the focus of this study, is part of the Greater Victoria Metropolitan Region. Occupying an area of 208,820 km^2, it is the most populated municipality in Espirito Santo[7]. It is the oldest city in the state, and one of the oldest historic cities of Brazil, dating to the time of the country's initial colonization in the 1500s. The important economic sectors include tourism, industry and foreign trade because of the port system and small and medium industrial companies.[8] The National Center for Risk and Disaster Management (CENAD)[9] included Vila Velha among the 821 priority Brazilian municipalities through the end of 2014.

Methodological Procedures

To achieve the objective of this article, the following methodological procedures were undertaken:

(1) Analysis of the discourse of national, state and municipal policies. This analysis sought to verify the integration of guidelines from the Hyogo Framework for Action/HFA (www.unisdr.org/hfa) to policies in the different government levels. That is, it sought to observe how these guidelines are replicated at the national, state and municipal levels through a content analysis. A comparative framework was produced based on the priorities for action and guidelines established by the HFA (UNISDR, 2005) in the following documents: NATIONAL POLICY, Lei [Law] Nº 12.608, of 10 April, 2012; the STATE PLAN for civil and defense and protection; lei estadual complementar [complementary state law] 694/2013; PLANO MUNICIPAL de CONTINGENCIA [Municipal Contingency Plan] Vila Velha/ES and law 5264/2012 about the creation of the municipal civil defense coordinator in Vila Velha.

[6] http://www.defesacivil.es.gov.br/conteudo/legislacao/default.aspx accessed on 15/11/2013.

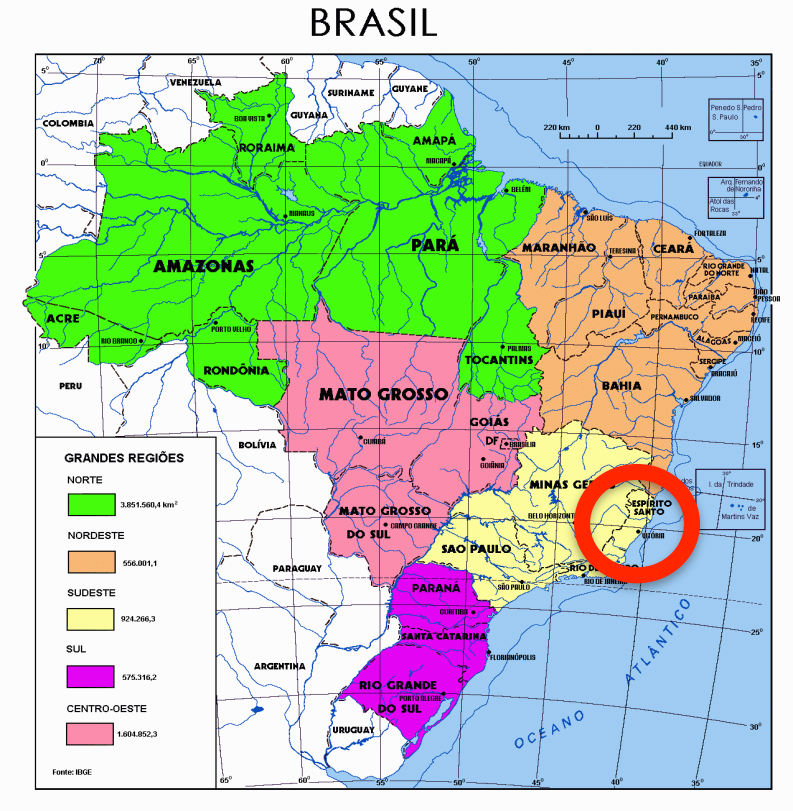
[7] Vila Velha's population = 458.489 / Epírito Santo's population = 3.839.366, http://cidades.ibge.gov.br/download/mapa_e_municipios.php?lang=&uf=es accessed on 27/12/13

[8] www.**vilavelha**.es.gov.br, accessed on 15/11/2013.

[9] CENAD is the agency responsible for the agile management of strategic actions for preparation and response to disasters in national territory and even, internationally, with the purpose of providing suitable conditions for the security of populations in areas of risk. It is up to CENAD to consolidate information about risk in the country, such as maps of areas of risk of landslides and floods, in addition to data related to the occurrence of natural and technological disasters and the associated damage. The management of this information allows the Center to support states and municipalities take actions to prepare for disasters together with the most vulnerable communities. (http://www.integracao.gov.br/web/guest/defesa-civil/cenad/apresentacao;jsessionid=37BA01F2375225F61984C5CAA0114329.lr1, accessed on 15/11/2013)

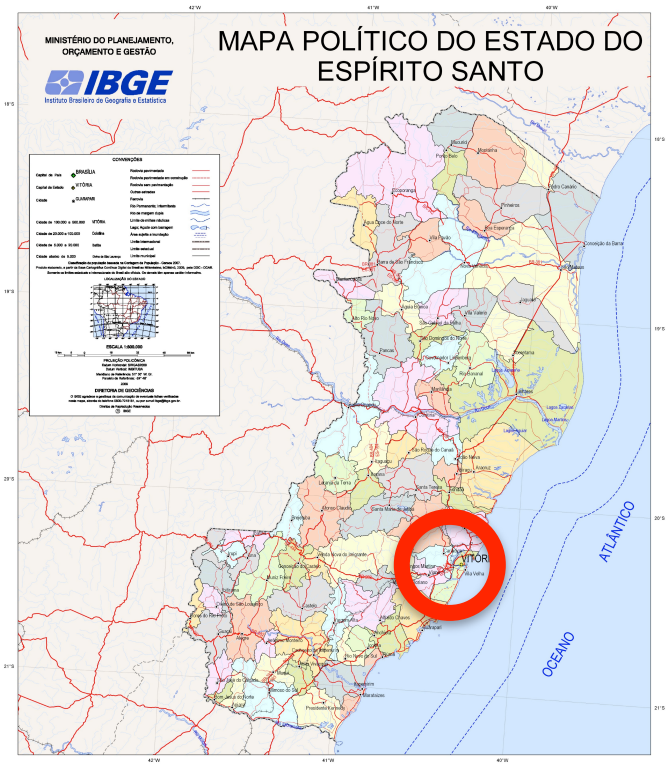
(2) Interviews: Interviews were based on a structured questionnaire designed to understand the communication process for sharing DRR guidelines and principles involving civil defense actors involved with DRR actions on the state and local levels. Priority was given to interviews with members of the Civil Defense and Protection Committee of Espirito Santo and the Municipal Civil Defense Coordinator. In addition, on a national level those interviewed included a federal deputy, who wrote the congressional report on federal law 12. 608/2012 and a member of the National Civil Defense Secretariat /SEDEC.[10]

The first part of the article addresses the situation in Brazil in relation to DRR, in which the national policy will be compared with the Hyogo Framework for Action. The second part addresses the situation in Espirito Santo, in particular the municipality of Vila Velha, one of the municipalities in the Greater Vitória Metropolitan Region. The third portion of the paper discusses the data collected from interviews conducted with actors involved with civil defense and protection on a national, state and municipal level .



MAP 1: Brazil. IBGE, http://mapas.ibge.gov.br/politico-administrativo. Highlight on the state of Espirito Santo by the authors.

[10] SEDEC is part of the Ministry of National Integration



MAP 2: Espirito Santo. IBGE, http://mapas.ibge.gov.br/politico-administrativo. Highlight on the municipalities of Vila Velha and Vitória by the authors.

Situation of Brazil in relation to DRR

In recent years, Brazil has prepared to respond both to the commitment assumed internationally through the Hyogo Framework for Action 2005-2015 and to the disasters that have occurred in the past decade, particularly the mega disaster in the mountain region of Rio de Janeiro state in January 2011. Brazil formulated and implemented the National Civil Protection and Defense Policy (PNPDEC) (law 12.608/2012). In addition, the Ministry of National Integration (MIN) and the National Civil Defense Secretariat (SEDEC) realized the campaign "Constructing Resilient Cities: My City is Preparing,"[11] which places the responsibility for the development of resilience in the hands of municipalities. In addition, civil society has been mobilized in discussions about disasters in academic and non-academic forums.[12] It is also important to mention the Sasakawa 2013[13] award received by the civil

[11] http://www.defesacivil.gov.br/cidadesresilientes/ This campaign assumes that the municipality is the first to respond in moments of crises and emergencies, and it is thus crucial to integrate local governments with civil society to develop options to reduce vulnerabilities in cities from a perspective of sustainable development and the search for well being and security of citizens. This is an effort to engage and raise the awareness of local governments to the benefits of reducing risks by implementing 10 steps to construct resilient cities http://www.defesacivil.gov.br/cidadesresilientes/#pos_conteudo, accessed on 15/11/2013.

[12] As is the case of the SEMINAR IN JOINVILLE (October, 2013) and the 1st International Seminar on Disaster Studies held in Florianópolis (SC) in November 2013; the Seminar "Constructing Resilient Public Spaces," in Porto Alegre (RS) when the "Resilient Cities" Campaign was presented (November 2013); "Constructing

defense agency of Belo Horizonte, which demonstrates recognition for efforts taken in support of DRR in Brazil.[14]

According to SEDEC,[15] each of Brazil's large geographic regions has experienced a variety of recurring disasters. In the Northern region forest fires are common, provoked by manmade fires to clear land, as well as floods, although there have also been droughts, as in 2005; droughts are historic in the Northeastern Region, but there are also inundations and floods; forest-fires stand out in the Midwest, often related to land use and fires set to clear land; landslides are more common in the Brazilian Southeast; and in the South there have been an increasing number of floods, windstorms and tornados. All of these events have taken on an increasingly more intense character.

The objective of this section is to present a comparative chart that shows to what degree the HFA is contemplated by the guidelines and objectives of the National Civil Defense and Protection Policy PNDC/2012.

HYOGO FRAMEWORK FOR ACTION 2005-2015		**PNPDEC/2012**	
PRIORITIES FOR ACTION	**KEY ACTIVITIES**	**GUIDELINES**	**OBJECTIVES** [16]
(1) Make disaster Risk Reduction a Priority	• Creating effective, multi-sector national platforms to provide policy guidance and to coordinate activities; • Integrating disaster risk reduction into development policies and planning, such as Poverty Reduction Strategies; and • Ensuring community participation, so that local needs are met.	✓	✓
(2) Know the Rsks and Take Action	• Know the risks that they face, and take actions based on that knowledge; • investment in scientific, technical, and institutional capabilities to observe, record, research, analyse, forecast, model and map natural hazards.; and • Tools need to be developed and disseminated: statistical information about disaster events, risk maps, disaster vulnerability and risk indicators are essential.	✓	✓

Resilient Cities: My City is Preparing," in São Paulo (SP), with the mayors of the 208 must vulnerable municipalities of São Paulo state.

[13] Award given by the United Nations (UN) during the 4th Global Platform for the Reduction of Risks from Disasters, in Geneva, Switzerland for projects to reduce risks and disasters.

[14] Responding to the determinations of the Hyogo Framework for Action, the winning project stood out for the execution of various civil defense actions including the mapping of geological risks and flooding, of public shelters, and integration between institutions from different spheres, with the partnership of academic institutions responsible for preventive work in schools and with companies.

[15] http://www.mi.gov.br/sedec/apresentacao;jsessionid=EBC00F97BC07B10AF72244590558BB15.lr1 accessed on 18/11/2013.

[16] Not all of the objectives of the PNPDEC are included in this chart, only those most pertinent to this study were selected.

(3) Build Understanding and Awareness	• Providing relevant information on disaster risks and means of protection, especially for citizens in high-risk areas; • Strengthening networks and promoting dialogue and cooperation among disaster experts, technical and scientific specialists, planners and other stakeholders; • Including disaster risk reduction subject matter in formal, non-formal, and informal education and training activities; • Developing or strengthening community-based disaster risk management programmes; and, • Working with the media in disaster risk reduction awareness activities.	✓	✓
(4) Reduce Risk	• Moving communities from hazard-prone areas, such as flood plains; • Rebuilding forests and wetlands, thereby developing the capacity of the environment to withstand hazards; • Building public facilities and housing able to withstand the impacts of hazards; and, • Having social and financial safety mechanisms in place		✓
(5) Be Prepared and Ready to Act	• The development and regular testing of contingency plans; • The establishment of emergency funds to support preparedness, response and recovery activities; • The development of coordinated regional approaches for effective disaster response; and, • Continuous dialogue between response agencies, planners and policy-makers, and development organizations.		✓

TABLE 1: Comparative chart of priority actions and suggestions for activities needed to achieve them according to the Hyogo Framework for Action 2005-2015 and Guidelines and Objectives of National Protection Policy/PNPDEC (Law 12.608, of 10/04/2012). Prepared by the authors.

Many of the priority actions and activities suggested have been inserted in Brazilian documents about the issue as can be seen in the National Policy for Civil Defense and Protection /PNPDEC (Law 12.608, of 10/04/2012).[17] It is worth mentioning article 2 of this policy that determines that "It is the responsibility of the federal government, the states, the Federal District and the municipalities to adopt the measures needed to reduce risks from disasters." In addition, the same article determines the need for cooperation between entities from different spheres (public or private) and society in general, to guarantee the participation of communities made vulnerable in the process of understanding situations of risk and formulating actions for prevention and response as called for in HFA.

Nevertheless paragraph 2 of this document clearly indicates that "Uncertainty about the risk of disaster is not an impediment to the adoption of measures to prevent and mitigate situations of risk." That is, the preparation and adoption of a local plan of

[17] http://www.defensoria.sp.gov.br/dpesp/Repositorio/28/Documentos/Lei12608-12.pdf accessed on 14/05/2013.

prevention and mitigation measures is essential to disaster risk reduction (DRR), even considering the uncertainty of the event. Chapter II, section I, establishes the guidelines and objectives of the policy, which address prevention, mitigation, preparation, response and recuperation actions and emphasizes that the PNPDEC should be integrated to other policies such as those for land-use planning, urban development, healthcare, the environment, climate change, water resources management, geology, infrastructure, education, science and technology and other sectorial policies to promote sustainable development.

As suggested in the final HFA document, Chapter II, section II of the law establishes the competencies of the various government spheres (national, state and municipal) as well as their articulations. It also calls for "promoting studies referring to the causes and possibilities for the occurrence of disasters of any origin, their incidence, extension and consequence"; "provide incentives to the installation of university centers for teaching and research about disasters and multidisciplinary centers of permanent and distance education dedicated to research, extension and training human resources, focused on the administration and execution of activities for civil defense and protection" (item III and XI respectively); and reaffirms the responsibilities of the states and municipalities in the preparation of their Civil Defense and Protection Plans and Contingency Plans.

Box 2.1

Based on this law, Brazil's Ministry of National Integration and National Civil Defense Secretariat implemented the campaign "Constructing Resilient Cities: My City is Preparing," which recognizes the municipality as the first to respond to crises and emergencies and is based on the essential integration of local governments with civil society to develop innovative solutions that allow cities to become involved in reducing vulnerabilities.

In relation to promoting dialog between the agencies as recommended by the HFA (priority 5) it is worth calling attention to the harmony between the CEMADEN and CENAD with a technological infrastructure that supports its functions of monitoring alerts and communicating them to the municipalities. The recovery of forests and mangroves (as well as other ecosystems) is the objective of policies for biodiversity conservation and the National Climate Change Policy, in addition to the National Environmental Policy. Perhaps the greatest effort to be taken is in relation to the insertion of DRR in the country's formal and non-formal educational systems. Networks of professionals for dealing with disasters have been formed in conjunction with the Ministry of National Integration through SEDEC, PNUD and UNISDR-BR.

Situation of Vila Velha in the context of Espirito Santo State

The objective of this portion of the paper is to present the efforts that have been made in Espirito Santo state and in particular in the municipality of Vila Velha to support DRR. Initially, a brief historic contextualization is needed to understand the formation of situations of vulnerability that justify the implementation of state and municipal policies and

laws aimed at civil defense and protection. It then comments on the comparative frameworks related to these public actions.

Historic Contextualization

The expansion of capitalism in Brazil and the need for greater integration to international capitalism has promoted changes in the socio-spatial scenario of the largest Brazilian cities, mainly since the 1960s, with accelerated urban expansion within a broader framework of economic, social and political change. Thus, the unorganized urbanization that characterized the growth of cities is an important element in understanding the configuration of urban socio-spatial vulnerabilities in contemporary Brazil. In Espirito Santo, the state changed its course in the 1960s, following the new directions of national economic policy. It shifted from being an exporter of raw materials (mostly coffee) to a new standard of industrial accumulation, made viable by the implementation of Large Impact Industrial Projects, which would decisively insert the state economy into the logic of the international capitalist market, marking an alteration in the local economic structure, which from a predominantly agricultural exporter, shifted to a secondary goods exporter, focused on large-scale industrial production of goods.

This process took place in an accelerated and unequal manner, radically altering social relations between the country and the city, driven by a large rural exodus in direction of the Greater Vitória Metropolitan Region where the municipality of Vila Velha is located. In the context of the changes underway, the organization of urban space, the infrastructure and the urban services in the region of the capital did not include mechanisms that would assure the entire population access to public benefits, as a guarantee for urban insertion and better living conditions, contradicting the logic of the development and modernization process of the central countries. The accelerated urbanization combined with the absence of urban planning and public services aggravated the urban problems revealing the poverty and socio-spatial segregation (SIQUEIRA, 2010a; SIQUEIRA, 2010b). In the municipalities of Greater Vitória, this process would characterize the profile of the new development model. In this way, the city act as a catalyst and stimulant of modernization, expanding its potential, but, as Lojkine affirms "urbanization is molded and modeled according to the needs of capitalist accumulation" (LOJKINE, 1997, p. 163).

Unplanned and unequal growth shaped the Greater Victória Metropolitan Region, affecting all the municipalities, mainly Vila Velha, where the occupation of urban space was most expressive, causing favelization and proletarianization, with the expansion of the periphery that came to house a large portion of the non-specialized labor force seeking work in the construction of large factories and low-income housing projects that multiplied in the peripheries of the municipalities. Since 1980, due to the urban growth and the new socio-economic demands, Vila Velha gained "[...] a broad range of services, logistics and a large clothing manufacturing industry, which reshaped the geographic space, inserting itself in the logic of large urban centers and losing the characteristics of a typical village. In this context, the municipality aggregates "two cities," one along the coast, with real estate speculation and some economic and commercial attractions; and another peripheral and

marginalized that occupies the large demographic voids around these regions (MATTOS, 2011, p. 05).

The more distant empty spaces that are devalued by the real estate market become spaces with irregular occupations, most in the forms of invasions, particularly lowlands, mangroves, river margins and along highways. Social and environmental vulnerability overlap in these occupations (MATTOS and DA-SILVA-ROSA, 2011; DA-SILVA-ROSA and MATTOS, 2012). These spaces become home to a large contingent population in conditions of socio-spatial and environmental vulnerability, allied to the situation of social risk that naturally took shape amid the local needs (SIQUEIRA, 2010a). These spaces of segregation, needs, vulnerabilities and social risk situate individuals very close to the frontiers of marginality, where groups are involved in the realm of a precarious living situation, which limits the perspectives for social mobility in the diversity of urban life.

In the Greater Vitória Metropolitan Region, the magnitude of the urban problems come to reflect the problems of the population itself, which increased in the last decades of the 20th century. The census data from IBGE[18] express this reality: in 1960, the population of Greater Vitória[19] represented 13.7% of the state population. This situation changed completely in the following decades and by 1990 accounted for 40.9%, growing to nearly half the state population, or 46.7% in 2000 and 48% in 2010. In this population universe, the municipality of Vila Velha, between the 1960 and 2010 censuses, came to concentrate an average of 280% of the metropolitan population, in a dynamic of socio-spatial segregation closely correlated to rates of violence[20].

In this scenario of vulnerability in Espirito Santo, disasters are observed such as inundation and flooding, drought, wind storms, hail storms, landslides and marine erosion.[21] Of the 470 disasters registered between 2000 and 2012, 301 are related to floods and 77 to droughts. In recent years, the metropolitan region has experienced the reality of precarious settlements, which have suffered from intense rains that cause both floods and landslides, exposing the population, particularly those in situations of vulnerability, to risk of disasters, with human, social, economic and environmental damage. It is thus understood that this exposure to risk reflects situations of vulnerability that are historically constructed by the prevailing development model (MATTOS and DA-SILVA-ROSA, 2011; DA-SILVA-ROSA and MATTOS, 2012). In the municipality of Vila Velha, inundations, floods, landslides and windstorms have become more prevalent (PMVV, 2013). Vila Velha has, historically had significant floods, yet they have recently become more catastrophic due to irregular urban occupation since the 1970s and '80s.

Espirito Santo was one of the first states in the country to have a state civil defense and protection policy. The site of the Espirito Santo Civil Defense agency[22] provides

[18] Data from IBGE apud Siqueira (2010a); Mattos and Da-Silva-Rosa (2011).

[19] For the sampling of the population data of the Greater Vitória Metropolitan Region we understand that the region includes the traditional municipalities, that is: Vitória, Vila Velha,, Cariacica, Serra and Viana.

[20] Population in 2010: 1.687.704 inhabitants, http://cidades.ibge.gov.br/download/mapa_e_municipios.php?lang=&uf=es, accessed on 27/12/2013

[21] PEPDC http://www.defesacivil.es.gov.br/files/pdf/PEPDEC-ES_2013.pdf, accessed on 18/11/2013

[22] http://www.defesacivil.es.gov.br/ accessed on 18/11/2013

important information about various topics, for example: what prevention actions to take "before, during and after" a disaster;[23] the documents needed to decree a situation of emergency or a state of public calamity in the municipalities of Espirito Santo; the contingency plans of some municipalities in the state[24] and a list of the Municipal Civil Defense Coordinators of ES. It should be noted that the Civil Defense agency, in partnership with Arcelor-Mittal-Tubarão (a large multinational company that operates in the state) produced the publication "O Histórico de desastres do Estado do Espírito Santo – 2000-2009" [The History of Disasters of Espirito Santo State – 2000- 2009]. In this sense, the Civil Defense agency has been assuming its role in DRR, as suggested by the Hyogo Framework for Action and as called for by the National Civil Defense and Protection Policy (PNPDEC). The state and municipal references that guide the DRR actions for the case of Vila Velha are established within this context.

Civil Defense and Protection in Espirito Santo

Two state level references for DRR are discussed below: (1) the State Civil Defense and Protection Plan, considered to be the contingency plan for ES: and (2) Complementary State Law 694/2013, which reorganizes the state Civil Defense and Protection System.

The state Civil Defense and Protection Plan (PEPDEC) determines that the effects of a disaster be minimized and that social normality (sic) be re-established through actions for prevention, preparation and response. From a general perception, it meets the determination of the HFA, however, it is possible to perceive some dissonance with the spirit of the HFA.

This is the case of PEPDEC actions, which focus more on response. This is justified because it is a contingency plan. The PEPDEC addresses prevention and preparation, mainly in the description of the specific responsibilities of each agency and in the presentation of the mapping of risk. It is also important to note that the guidelines presented in PEPDEC do not consider the issues of poverty reduction and community participation to satisfy local needs, as called for by HFA. It appears evident that the PEPDEC does not contemplate the contribution of the community in the elaboration or implementation of the DRR actions. Local communities are only treated as the population to be served by the actions. That is, the community is not perceived as being one of the responsible actors and administrators in the process as the HFA calls for. It should be recognized that at this level, two actors are not mentioned: the universities[25] and the Instituto Jones dos Santos Neves, the state research agency.

Finally, it is important to emphasize that communicability between the national, state and municipal levels is foreseen in Complementary State Law 694/2013, in terms of: (1) coordination and promotion related to the implementation of joint actions between the state and municipal levels; (2) the presentation of information and support to the National Secretary for Civil Defense and Protection concerning the occurrence of disasters and other civil defense activities. According to this law, the state government should promote the development of public policies that help to create instruments for the joint execution of

[23] http://www.defesacivil.es.gov.br/conteudo/dicas/chuvas/default.aspx accessed on 14/05/2013.
[24] This site does not present the Contingency Plan for Vila Velha.
[25] Espirito Santo has two universities: one federal (UFES) and one private (UVV), where there are research groups interested in the issue of DRR.

actions by the state and municipal Civil Defense and Protection Agencies, and can enter technical cooperation and financial agreements for the purpose of training.

The case of Vila Velha/ES: Law 5265/2012 and the Municipal Contingency Plan

In the case of the municipality of Vila Velha, reference documents for the DRR actions include: (1) law 5264/2012, that creates the Municipal Civil Defense Coordinator /COMDEC-VV; and (2) the Municipal Contingency Plan of Vila Velha/PMC-VV, of October 2013, both presented in the comparative table. This section of the paper shows to what degree the HFA is contemplated by both documents.

HYOGO FRAMEWORK FOR ACTION 2005-2015		**MUNICIPALITY OF VILA VELHA/ES**		**ESPIRITO SANTO STATE**	
PRIORITIES FOR ACTION	**KEY ACTIVITIES**	**PMC/VV/ ES (2013)**	**LEI 5264/20 12**	**PEPDE C/2012**	**COMPLEMENTARY STATE LAW 694/2013**
(1) Make disaster Risk Reduction a Priority	• Creating effective, multi-sector national platforms to provide policy guidance and to coordinate activities; • Integrating disaster risk reduction into development policies and planning, such as Poverty Reduction Strategies; and • Ensuring community participation, so that local needs are met.	✓	✓		✓
(2) Know the Rsks and Take Action	• Know the risks that they face, and take actions based on that knowledge; • investment in scientific, technical, and institutional capabilities to observe, record, research, analyse, forecast, model and map natural hazards.; and • Tools need to be developed and disseminated: statistical information about disaster events, risk maps, disaster vulnerability and risk indicators are essential.	✓	✓	✓	✓
(3) Build Understanding and Awareness	• Providing relevant information on disaster risks and means of protection, especially for citizens in high-risk areas; • Strengthening networks and promoting dialogue and cooperation among disaster experts, technical and scientific specialists, planners and other stakeholders; • Including disaster risk reduction subject matter in formal, non-formal, and informal	✓	✓	✓	✓

	education and training activities; • Developing or strengthening community-based disaster risk management programmes; and, • Working with the media in disaster risk reduction awareness activities.				
(4) Reduce Risk	• Moving communities from hazard-prone areas, such as flood plains; • Rebuilding forests and wetlands, thereby developing the capacity of the environment to withstand hazards; • Building public facilities and housing able to withstand the impacts of hazards; and, • Having social and financial safety mechanisms in place	✓	✓	✓	✓
(5) Be Prepared and Ready to Act	• The development and regular testing of contingency plans; • The establishment of emergency funds to support preparedness, response and recovery activities; • The development of coordinated regional approaches for effective disaster response; and, • Continuous dialogue between response agencies, planners and policy-makers, and development organizations.	✓	✓	✓	✓

TABLE 2: Comparative framework of priority actions and suggested activities needed to achieve them according to the Hyogo Framework for Action 2005-2015 and, on the municipal level, the Municipal Contingency Plan and Municipal Law 5264/2012 and, on the state level, the state Civil Protection and Defense Plan and the Complementary State Policy 694/2013. Prepared by the authors.

The municipal contingency plan considers a long-term problem in the municipality: intense rains that provoke flooding and landslides; as well as unorganized land use by low income populations or those excluded from the development process, and thus recognized as being socially vulnerable. The objective of the municipal contingency plan is to "delineate prevention, preparation and response actions to minimize the effects of disasters and re-establish social normality." Communication between the national, state and municipal levels is evident in the municipal contingency plan, which makes references to the PNPDEC (Federal Law 12608/2012) and to Complementary State Law 694/2013. In addition, Vila Velha's municipal contingency plan reproduces the technical definitions for disaster, damage, loss and recourse, situation of emergency and state of public calamity found in the PNPDEC.

It is also evident that the municipal contingency plan is an action plan for disaster preparation and response. Therefore, it leaves the dimension of prevention as secondary when it suggests, but without offering greater detail, the mapping of areas of risk and the

mitigation of vulnerabilities. Nevertheless, the municipal plan makes clear that a focus on prevention and reconstruction must be maintained.

In terms of the municipal law, it is clear that there was communicability between different levels and agencies when it addresses close exchange among them, and even mentions community participation, proposing integrated action and dialog during all the phases of a disaster, that is, prevention, preparation, response and reconstruction. It reaffirms the definitions of disaster, situation of emergency, state of public calamity and civil defense as well as the competencies of the coordinator that was created by the law.

Analysis of the interviews: results and discussion

The selection of the agencies from which people would be interviewed was based on those that participate in the Civil Defense Committee of Espirito Santo/CCDC-ES and in the Municipal Civil Defense Coordinator of Vila Velha/CMDC-Vila Velha, each of which has representatives of 18 government secretariats (n=36). Those interviewed are thus employees of the various secretariats, totaling eight informants (22.2%). On the municipal level, administrators participated from the secretariats of the environment, education, and sports and leisure and from the municipal civil defense coordinator, for a total of 4 interviews. From the state level were interviewed members of the state environmental institute (IEMA),[26] the state civil defense agency and the military police, totaling 4 interviews. From the national level were interviewed the federal congressman responsible for writing the report used in the process of approving Law 12.608/2012 and an employee of the National Center for Risk and Disaster Management (CENAD).[27]

To conduct the interviews a questionnaire was prepared that was organized around four issues: (1) general knowledge about the HFA, addressing knowledge of its objectives and priorities for action and government DRR actions; (2) the communicability between the different levels of government, including the presentation and evaluation of the transmission of information between the levels, factors that influence the communication by the administrators and strategies for improving communication; (3) the integration of the HFA in the national, state and municipal policies, considering attending the HFA objectives in the state and municipal contingency plans; and (4) the concept of risks in the policies, discussing their suitability to deal with the question of disaster, mainly, in the case of extreme climate events.

Using the data collected by this instrument the study sought to understand the communication process between the main actors involved in civil defense and protection in the country, or that is those dealing with DRR on the national, state and municipal levels.

I. In relation to the knowledge of HFA in the municipality and state, the situation is curious. If, on one hand, there is a general lack of knowledge of this framework, on the other, the notion of DRR is becoming consolidated through the practice of the administrators. This is probably explained by the influence of Law 12.608/2012 (PNPDEC, of

[26] Two administrators were interviewed, one from the Administration of the Climate Change Program and one from the Water Resources Directory.
[27] CENAD was created by Decree Nº 5.376/2005 and is coordinated by the National Civil Defense Secretariat.

January 2012), which requires the elaboration of state and municipal contingency plans. In the case of Vila Velha, the influence of the PNPDEC and of the State Civil Defense and Protection Plan/PEPDEC (of October 2012) is clear, given that its contingency plan was published in October 2013.

An exception is found among those interviewed at the federal level and those interviewed from the state civil defense agency and military police on the state level. In the later case, the historically military nature of these institutions should be noted.[28] These agencies are more directly involved in the first response to disaster victims in the country, as one respondent indicated: "Basically the military police is the first to arrive. It is the first to become aware [of the situation] the first to provide help. It is clear that other institutions have a capacity, a strong qualification in this area, as is the case of the fire department."

On the other hand, note that formal voluntary work (as exists in other countries) is quite fragile in the scenery of disasters in Brazil, and until a short time ago, even nonexistent, which compromises response. Formal voluntary participation does not appear in the contingency plans studied on either the state or municipal levels. To the country, voluntary work, in practice, is much more informal and temporary, undertaken primarily by people in the communities affected who, out of solidarity, join together at the time of a tragedy. Solidarity networks are often established when a catastrophe gains national attention, as was the case of the recent floods in Santa Catarina, the Northeast and Rio de Janeiro. It cannot be said, however, that they only exist in times of tragedy because in some cities, as in Belo Horizonte, the role of volunteers is more active, even in disaster prevention, where there is more expressive community participation. In the most recent rain events in Vila Velha there was community action in response, organized by non-governmental organizations (such as local NGOs MAIS and Operartes) and religious institutions.

When we asked about the DRR strategies, various examples were given and recognized as being essential. On the municipal level, the informants mentioned mapping and accompanying of floodable areas through a master drainage plan to guide the removal of people from areas of risk, while respondents also mentioned the lack of precise records and the high cost of infrastructure work. In relation to state actions, those interviewed mentioned the Climate Change Program, which calls for an integrated monitoring and alert center and dialog with large private institutions located in the state.

In other words, according to one of the informants, "the strategies range from the organization and instrumentalization of the state, approximation to the private sector, approximation to the federal government...". No one interviewed emphasized the awareness that educational work with the population could contribute both to prevention and to response and reconstruction as raised in HFA. It is obvious that the mitigating actions mentioned will have more of a medium term impact, that is, after the projects have been efficiently implemented, the population in a risk situation would see the positive effects of this organizing work. This question of time is, however, *unfair* to the degree to which the

[28] It was previously mentioned that the very creation of Civil Defense in Brazil, in the mid 20th century, took place within a militarized concept that remains until today. One of those interviewed from the state level called attention to this fact: "Why does the Civil Defense operate as it does? It operates in a structure. Brazil is basically military. So, the people work with an operational command system and this functions not only in disaster response but during the operations. When there is no disaster, it functions in the same manner.

communities located in physical environments that naturally present risk – such as flood plains or hillsides, as found in Vila Velha – must leave these situations of risk as quickly as possible, that is, before the next events that could lead to socio-environmental disasters.

Box 4.1

In practice, the focus of the actions is still much more on response than on prevention, because the prevention approach was introduced by the federal law of 2012 under the influence of the debate about DRR that took place internationally, as made clear both by the congressman who wrote the report on the law and others interviewed: "The law sought to work with disaster, prevention, vulnerability, resilience, to bring within the law the concepts that have been discussed in the United Nations, in the international strategy for disaster risk reduction, so these components were included.

In parallel to this approach, the need was recognized for government investment in prevention because, according one of the informants from Vila Velha, "if you invest in prevention, you automatically minimize the effect of a natural disaster event, of the scope of the disaster." Nevertheless, this investment reveals the problem of the financial difficulties, mentioned by a number of people interviewed, when undertaking infrastructure works for prevention. Since, after all, "the lack of resources is out of the control and management of those who are in command of this." There appears to be interference in the communication between the actors about this issue, because, like a disaster, the work takes place locally, and financing often passes through an intricate and fragile process that appears to favor immobility and inefficiency, as characterized in the following declaration: "The federal government released lots of funds, lots of money for prevention and reconstruction, but this procedure is still extremely fragile, that is, there is no strong institutional capacity in the municipal governments and states to make good use of the funds that are being made available. So what happens is often that you release funds and they go unused for one or two years at the door of a municipality, or a state without effective use for this investment to take place."

This statement indicates the need for institutional strengthening at a local level, which does not necessarily consider the municipal authority as the only responsible actor: "we need to have more tools so that from a legal perspective these resources can be applied properly." After all, it is understood that, in DRR, everyone is involved and must know their responsibilities, both for preservation and in response and construction. According to the data collected, these tools would include legislation that gives greater technical capacity to the municipalities to manage their civil defense and protection coordinators and to achieve the HFA goals. What has been happening in Vila Velha and ES is an example of this to the degree to which the sharing of responsibility requires articulation between the agencies composing the CCDC-ES and the CMDC-Vila Velha. Even if one of the people interviewed commented about the lack of articulation between the government actors and their partners in the emergency, what should be emphasized is the need for training to improve this organization of victims' services.

On both the state and municipal level, each actor has established in its respective plans the roles to be taken in an event. In Vila Velha, each secretariat has two representatives "available in case of a natural disaster." They are called the "focal points" of the contingency plan. In other words, DRR is understood to be something to be addressed by all the secretariats, indicating that the function of administrating the DRR in Vila Velha is that of the Civil Defense and Prevention Coordinator, which is also responsible for "mapping areas of risk, accompanying and anticipating any natural event that may occur." It is important to highlight the previously mentioned roles of these government institutions that by their nature are already acting in the daily life of communities, such as the military police which, in addition to having greater capability to report eventual problems, are the first to act. If well trained, these actors can strengthen mitigating and or response actions.

In parallel to this topic, data collected indicate the municipality's technological inadequacies, which weaken the necessary institutional structure for monitoring or responding to events, that is, for DRR management. This is made clear in this statement: "we always depend on information from the state meteorological service or the federal government meteorological services. And we pass to them some of our own local information. How much did it rain in Vila Velha? We will know this immediately." That is, the regulation of DRR through the revision of national legislation has brought to the center of the issue the problem of a lack of technology in the municipalities, often because, traditionally, the local government did not perceive this responsibility as it does today. Another person, discussing the information that sustains local actions, emphasized the role of the media and the Internet as communication channels that provide information so that the municipality can do its work better. One exception is "Geobases"[29] which is "a tool that is very good and that can be much better for a number of the issues that we need to handle," according to one of the local informants.

It is important to emphasize an issue that came up in the statements of the municipal actors, mainly in the realm of urban development or the environment. When addressing what appears to be the largest problem in the more urban portion of Vila Velha, that is, flooding,[30] two people interviewed call attention to the issue of the consolidated city in relation to the need for prevention actions for the population in a situation of risk, prevention that relates to better urban quality. One of those interviewed stated that "to deal with this

[29] The GEOBASES/Integrated System of Geospatial Bases of Espirito Santo state integrates public and private institutions from different areas to compose, maintain, use and share the state's geospatial information. http://www.geobases.es.gov.br/portal/, accessed on 10/12/2013.

[30] Because of the geography of VILA VELHA, two types of events are more common: landslides and floods. Nevertheless, one of those interviewed made clear that geography is a factor to be considered in the DRR: "Vila Velha is a city built on a flat region close to sea level, susceptible to flooding, rain, overflowing rivers... .One of our concerns was the Jucu River. If the river rises, or there is a flood or intense rain in the headwaters, this water comes to harm Vila Velha. But some contention projects have redirected the waters of the Jucu River. The flooding here is caused by a lack of planned infrastructure. Our channels are channels with still inefficient sections unsuitable to the volume that we have, they are always subject to overflowing and spilling through the low streets, the lowlands, there are buildings installed or built in improper situations and susceptible to receive all this. Now there is not a risk of you having an immediate accident there. But you run the risk of epidemics, of health, since some diseases are linked to water; leptospirosis, fever and diarrhea. This can affect the population located along these meanders. In relation to the risk of collapses, landslides, we have some critical areas, mainly those along the Vitória Bay, some buildings on hillsides are still in areas of risk, but they are not large in Vila Velha."

[DRR], after it is already consolidated is much more expensive, it is much more difficult, much more burdensome in all ways." This is related to the lack of urban planning, which the informant said is something cultural in Brazil.

II. In relation to communication between the different government levels, it is essential to highlight certain issues, beginning with the recognition, by most of those interviewed of the importance of communication in the entire process of construction of what can be called the "culture of DRR" in Brazil. This communication would facilitate, according to one of the informants, "a financial flow, the flow of information, access to knowledge, which at times is highly specialized."

Those from the state and municipal level who were interviewed perceive that the communication needed for the diffusion of the principles and orientations of the DRR takes place in two ways: (1) horizontally, or that is, between the different secretariats; (2) and vertically, between the national, state and municipal spheres. One impact of the horizontal communication is the insertion of the concept of risk management in sectorial public policies – sanitation or housing on a state level. In Vila Velha, communication can also be observed in the statement of the administrators from the secretariats of urban development and sports and leisure. In addition, the two contingency plans analyzed had so-called "focal points," who were administrators from different secretariats who had defined roles in case of an emergency. Nevertheless, on both levels, the efforts focus more on emergency response.

The importance of obtaining information both about DDR and about how other municipalities are dealing with problems related to vulnerability and the risk of disasters permeated the statements, mainly those of the municipal administrators. They affirmed that accessibility to state and federal agencies was positive in the dialog. Even in the case of emergency the national SEDEC is present, as indicated in this statement: "Our physical contact is much more with the state. But every time we get in contact, with the federal agency by telephone and e-mail we get a response, it is not a distant agency. For example, in the rainy season complete facilities are offered. They are accessible." This demonstrates the existence of a certain organization of the institutions in the case in focus, which is indispensable according to the statement of the national administrator, for being able to mobilize during an emergency: "It is essential to have efficient mechanisms and processes that allow communication between the various actors involved, facilitating the mobilization of human material and financial resources to disaster response."

One of the ways to establish communicability between the different levels is in face-to-face meetings or by developing joint strategies at a distance that can contribute to the transmission of information about DRR. On a state level, those interviewed mentioned participation in workshops[31] which was not mentioned by those interviewed from Vila Velha except for the informants from the municipal civil defense agency. In this municipality, one notes that although the statements of those interviewed indicate knowledge about DRR, there is a lack of knowledge of strategies for transmitting specialized information (training for example). This is not to say, however, that there is no type of training or education as

[31] In relation to this was mentioned participation, even abroad, through the National Water Agency (Agência Nacional de Água/ANA).

we will see below. For example, a mapping of events was provided on the sites of the national and state civil defense agencies to verify the verticality of communication between the spheres.

The mapping identified 25 events with various objectives, most of which were not academic. In 2013, 19 training events were held[32] by the state Civil Defense Coordinator,[33] in various municipalities, which revealed an effort to bring the state coordinator closer to the municipalities. On a national level,[34] since 2010, six events have been held on both a national and international level including: the 10th National Civil Defense Forum (September 2013), Understanding Risk Brazil 2012 (November/2012), National Civil Defense Award 2012 (November 2012), the IX National Civil Defense Forum (June/2012), the I Civil Defense and Humanitarian Assistance Conference (March/2010), and the I International Seminar about Risk and Disaster Management (April 2010).

There was also the fourth national edition of the Basic Civil Defense Training Course, which is now underway. This is a free distance education course realized in partnership with the Federal University at Santa Catarina (UFSC), whose target public is civil defense agents. Still on a national level, two events are planned: the National Civil Defense Medal 2013 and the II National Civil Defense and Protection Conference, integrating the national, state and municipal levels as well as civil society in discussions about civil defense from a systematic perspective.

These events indicate that efforts are being made to extend knowledge and information about DRR to an increasing number of municipalities, by both the federal and state government, to strengthen local civil defense. What seems to happen, according to the data collected on a national level, is that when a municipality has a well-structured civil defense system, the training, workshops, courses and simulations come to have greater demand. A lack of "strong institutional capacity," in addition to affecting the financial pass-alongs as mentioned, compromises the articulation and communication with the various levels of government in such a way that the distribution of "kits"[35] for strengthening the Municipal Civil Defense Coordinators/COMDECs is limited to those municipalities capable of producing documents that prove the municipality's commitment to the creation of a minimum structure for civil defense operations.[36]

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[32] These include the Municipal Coordinators Meeting, three meetings of the Operations Command System, three Disaster Simulations, four Risk Analysis courses, four Basic Courses in Civil Defense (one of them in Vila Velha), one Course in the Administration of Temporary Shelters, one Contingency Plan Course, the 2nd Espirito Santo Seminar on Risk and Disaster Management and the Refresher Course in Disaster Risk Management.

[33] http://www.defesacivil.es.gov.br/files/meta/9c79332b-f0d2-4891-8f9c-b26d981b2258/6599036b-a775-491e-9183-46806a8dd988/91.pdf accessed on 13/12/2013

[34] http://www.integracao.gov.br/web/guest/eventos and http://www.integracao.gov.br/web/guest/capacitacoes accessed on 13/12/2013

[35] These include: a truck, tablet, computer, GPS, digital camera, identification vests and other materials.

[36] For more details see the "edital" [public bid] on the site http://www.in.gov.br/visualiza/index.jsp?data=08/08/2012&jornal=3&pagina=92&totalArquivos=220 accessed on 13/12/2013

One concern identified particularly in the responses of the municipal managers and of the two people interviewed from the state environmental agency is the overlapping of actions or, as can mentioned in the statement below, the "shadowing of actions." This is related to two facts: (1) (possible) poor communication between agencies on different levels, mainly in emergency situations, showing that there can be communication problems despite efforts made by the contingency plan to clarify roles; (2) the form of handling communications between the state and municipality, because "Vila Velha does not have this experience...the state often assumes the role of local agent, in the processes of transformation of territory. ...The state government comes to the municipality to make a road, a road intervention that are actions of a local character... This is a confusion that we need to resolve so that we do not have a shadowing of actions, with everyone doing the same thing and areas where no one is doing anything, a void.

What can be emphasized from the two different comments and observations made above is that there is a need to stimulate (for issues that are still not mobilized) and reinforce (for those issues where there is awareness) horizontal and vertical integration among the institutions that deal with the DRR so that the development of prevention, response and reconstruction occurs in keeping with local needs. On the national level, informants mentioned that simulations are conducted in joint exercises to prepare for immediate mobilization in times of an emergency. One of the municipal administrators called attention to the issue of communication and mobility when a disaster occurs in rural areas, which often have less infrastructure than urban areas, making it difficult to attend victims.

III. In relation to the opinions of those interviewed about the integration of HFA to the policies, especially at a state and municipal level, the statements indicate that there is a lack of knowledge of the objectives and priorities suggested by the HFA. What is seen is a difference between the responses of those who are working in civil defense on a state and municipal level, and those who do not have regular ties to the institutions involved. Nevertheless, all those interviewed recognized the importance of disaster risk management in socio-environmentally vulnerable areas. In other words, it can be affirmed that there is an awareness about the theme in general among those who are the focal points inserted in the contingency plan.

It should be emphasized what one of the state level informants said about his institution, the Espirito Santo military police, when he mentioned the insertion of HFA in the policies, affirming that the principles of HFA are integrated to the national and state policies. He called attention to the cohesion of the civil defense system and to the practices that go beyond the discourse, both in the fire department and in the military police. After all, his agency has updated the so-called "Guidelines," which is the military police's action plan within the Contingency Plan. In this regard, horizontal communication between state agencies is indispensable according to this informant. In addition, in terms of municipal policy, he mentioned Vila Velha as a municipality where HFA principles are integrated and there is interaction among the different agencies involved in municipal civil defense practices.

Despite recognizing the insertion of the HFA priorities and objectives, the informants indicated that greater attention to these concepts is needed, highlighting community

participation and attendance to the needs of the local communities. Thus, it can be concluded, once again, that the principles of HFA and therefore of DRR are addressed in the policies of the different levels studied thanks to the communication among the agencies and their administrators, even if administrators do not have precise or specific knowledge about the international document.

IV. In terms of the concept of risk in the policies, one of the national informants and all of the state informants affirmed that the concept of risk included in the public civil defense policies is suitable for dealing with the issue of disaster. On the municipal level, 40% believe that the concept of risk is included; 40% affirm that it is not included, or that it is included with a need for improvement; and 20% did not respond to the question.

In a more detailed manner, on the municipal level, the concept of risk has come to be part of municipal policies since 2012, according to one informant. It should be emphasized that the concept of risk, although it is present in the policies, is not understood n a uniform manner by the administrators. For instance, one of the municipal informants affirmed that the risk is only related to epidemics and health issues, such as water-borne diseases, leptospirosis, fever and diarrhea. By focusing on health, this understanding of risk appears to deny a broader and more complex concept of risk and reinforces the idea of risk as a consequence of disaster and not as a pre-existing condition, as found in the perspective of risk in prevention of the HFA. This makes it clear that there is still a need, according to another informant, to "grow in the sense that the laws and rules are very static and the condition of risk is highly variable, I may not be at risk right now, but in ten minutes I may be.

In addition to defining risk as a situation prior to disaster itself, this variable condition mentioned raises the question of the historically constructed vulnerabilities of the communities in the debate about DRR in the country. It also gives the perception that the laws are too rigid because they do not consider, for example, the consolidated city, which was previously discussed. This variable condition of risk raises the question of land use and social inequality and also reveals that laws are often established after irregular occupation of urban land has occurred. After all, this occupation is in most cases conducted by a low income and socially excluded population that occupies spaces marginalized by the market – which in Brazil means occupying steep slopes, mangroves, river banks, that is, areas that federal environmental law determines should be reserved for permanent preservation and where it is illegal to build. This places risk as a factor to be inserted, from the perspective of prevention, into sectorial policies, as in the case of those related to urban development.

In this sense, a need is observed on the municipal level for improvements in the discussion and awareness about risk, as revealed in the following statement: "We [on the municipal level] are very incipient in this area. It is necessary to have more sources, awareness from government. Something conscious. I am not speaking of resources, I am speaking of awareness by the population." This points to a concept of risk that is communicated not only in the law or among administrators, but that is discussed even with the population, who often lack information about their condition. Despite recognizing the importance of community participation, the notion of risk management appears to be

understood by the municipal managers as being implemented by government by having better organization and trained personnel.

Box 4.2

From the perspective of state administrators, those interviewed agree that the concept of risk is present and satisfactory in the policies, encompassing both prevention and response. This concept is part of a civil defense system that has functioned, although it can be improved. This improvement is related to the fact that administrators have different understandings of the concept of risk, as mentioned above, and to a focus on the population that is in risk, related to a process of raising their awareness. However, the people interviewed note that there is a process of change in the formulation and organization of risk management practices by administrators, albeit a slow one.

Thus, a consonance is noted at the municipal and state levels, in that the informants maintain that the concept of risk is present in the policies, but there is no consensus in the understanding of this concept. This indicates a need for greater discussion about risk management involving both municipal administrators and the communities.

Finally, on the national level, according to one informant, the definition of risk in Brazil has been consolidated in the doctrine of civil defense for quite some time, but the informant sees a recurrent problem in the low effectiveness of public policies to deal with the issue. In terms of the effectiveness of policies, a second informant pointed to the complexity of the issue of DRR, which should be addressed by a variety of policies. He affirmed that "its not enough for us to speak of reducing the risk of disaster if we do not speak about climate changes on the planet, and if on one hand we advance in the policy of risk reduction, while on the other our legislation is made weaker concerning deforestation, attack on the biomes, the effective difficulty to establish sustainable development. Just look at the vote on the forest code." That is, the practice of DRR and its regulation should be accompanied by other sectorial laws for the work to be more effective.

In addition to relating environmental policies to DRR, it is also necessary to develop policies for the redistribution of wealth, which relates to the question of socio-environmental vulnerability. In the words of the informant mentioned above, "there is no use of speaking of reducing risks of disasters if we do not speak in distribution of wealth. The economic system that concentrates wealth maximizes disaster." This means that the current development model must be reconsidered, given that, as a producer of socio-environmental vulnerabilities, it is contributing to the construction of situations of risk, which are distributed unequally in the community (those who are most socioeconomically vulnerable are also the most susceptible to risks from disasters). Thus, DRR can be understood as an opportunity to enact sustainability principles, thus responding to the Millennium Objectives.

Pointing to socio-environmental injustice, this redistribution of wealth is also related to unorganized urbanization in which people migrate to areas where there are no land-use polices (nor low-income housing) capable of regulating occupation, causing these migrants to occupy areas of environmental risk, as is found in Vila Velha.

Final Considerations

The initial purpose of this paper was to look at the integration of the priorities for action established by HFA and the activities to achieve them on the national, state and municipal levels and the state and municipal contingency plans in Brazil. It then discussed the data collected from interviews with public administrators working directly or indirectly in disaster risk management and their understandings about the concept of risk and the integration of the HFA in the policies, their knowledge about HFA and the understanding about the communication among different spheres of government. In addition to focusing on the administrators, leaving aside other important actors involved in risk management, the geographic profile was limited to the state of Espirito Santo and the municipality of Vila Velha, one of the 821 Brazilian municipalities considered priorities for dealing with DRR.

In addition, the complex character of the issue became clear, which requires a more prolonged and deeper study to perceive developments in understandings and perceptions among administrators. Because the interviews were conducted at the end of the year, a time when plans, projects and budgets are being concluded, and of many government meetings; and a time of intense rains in the study's region of focus, it was difficult to schedule and conduct interviews with a larger number of administrators, which could enrich the data presented here. The study sought to attain a level of interviews with 20% of the total universe of actors involved in DRR, mainly at the state and municipal level.

This study does not conclude the approach adopted or the objectives of the study, considering that Brazil is a country of continental dimensions, encompassing quite specific local and regional realities. It should also be emphasized that this evaluative study about HFA is the first in the region of focus and the team that was involved in its execution believes that other studies should be conducted that focus on various regions of the country and consider other actors essential to DRR. Greater attention should be given by DRR studies to the perception and awareness of the historically vulnerable communities about the situations of vulnerability and risk in which they live.

Despite these considerations, it was possible to gather data that is important for evaluation of communication among the different government levels about the integration of HFA in the policies for the reduction of risks and disasters and the understanding among public administrators about risk and the HFA guidelines. It was clear that there is a lack of knowledge about HFA itself by the municipal coordinator, despite the fact that the municipal contingency plan for Vila Velha reflects the HFA guidelines and the statements of those interviewed mention DRR strategies. It is believed that this is due to the diffusion of the concept of risk management by the SEDEC and by the state Civil Defense agency, without mentioning HFA, which indicates the communicability between government spheres concerning DRR.

Nevertheless, even if communication among the different levels of government is taking place, there are some measures that can still be taken to improve the communication process. Given the lack of a single inventory of DRR practices or strategies at the national, state and municipal levels, the need arises for a mapping and systematization of data to establish a data base to form an information system capable of facilitating communication and the dissemination of data and information to the various actors involved. This data base

should be regularly updated, which requires technology capable of providing the municipalities the ability to monitor events and situations of risk. In addition, this system would be able to: (1) mitigate the problem of overlapping of actions among the levels as was indicated by those interviewed, which would decrease unnecessary spending and redundant results; and (2) reinforce the articulation between the agencies that compose the civil defense coordinators and between these and other possible actors and partners who can contribute to DRR.

Another element that could improve communication relates to the provision of funding and resources to the government spheres. According to the statements of some informants, the resources needed exist, but the problem is in transferring these resources from one level to another. It was thus perceived that there is an impasse created by bureaucracy and protocols that regulate these investments, which require that municipalities have a strong institutional capacity. It can be affirmed that this bureaucratic and financial impasse indicates a challenge to communication among government spheres about DRR, given that once there is a reconsideration about how funds can be invested, it would be easier to meet local or regional needs. Some measures have been taken, as is the case of the Civil Defense Payment Card, which was first distributed to the 821 municipalities listed as priorities for receiving attention and service, because of the number of occurrences of events. Nevertheless, the municipalities only receive this card if their COMDEC has a certain proven level of organization.

Another issue that calls attention is the capacity for communication between the national, state and municipal spheres and the communities in situations of risk. According to the statements of the administrators, it is difficult to inform local populations about prevention because it is difficult to gain space in the media, and there is little promotion of DRR actions, which makes it difficult to make the population aware of the issue. The media tends to focus on situations of tragedy, which have greater media appeal than prevention actions, such as cleaning channels and culverts in urban areas where there are unorganized forms of land use. Therefore, there is another challenge that goes beyond the issues studied in this project but that is important to the issue: communication between government and non-governmental agencies such as the press and private sector, as called for by HFA. These actors could also help raise community awareness about risks and vulnerabilities and promote sustainable mitigation and prevention actions as sought by the public sector.

Finally, a need was identified to establish and strengthen the culture of DRR, beginning with those agencies involved in the Civil Defense and Protection System. It was noted that although those who work directly with disasters and risks understand the importance of prevention, their work focuses on immediate response. Prevention requires a process of construction, which takes time, but it is highly important to achieve resilient communities, cities, states and a resilient country. This focus on response was evident when the concept of risk was raised. The understanding of this concept is not uniform, which requires greater raising of awareness, basically among those agencies that do not work regularly with civil defense and among the communities that are historically vulnerable, given the inherent complexity of the concept of risk established by HFA.

Given the issues discussed in this paper and these final considerations, it is important to emphasize that efforts have been made at all levels to mitigate disasters, mainly those stemming from natural causes, involving vulnerable populations in urban areas as is the case of the region studied. The forewarned tragedy known as the mega disaster of the Rio de Janiero mountain region has not been the only one and, unfortunately, will probably not be the last. It became a landmark event in Brazil that stimulated a discussion about revising the former legal basis of civil defense in the country. The resulting law 12.608/2012 is considered the first to deal with disaster from a more integrated and complex perspective that is no longer focused on response. It sought to integrate the recommendations of HFA, by working with concepts such as prevention, vulnerability and resilience, which are emphasized in the international debate.

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