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10 National and Local Contingency Planning: a Comparative Analysis of Plans in Africa and Latin America

Abstract: The past twenty years have provided evidence that preventive preparation of exposed communities can reduce the impact of natural disasters, hence the creation of contingency plans. Today these plans are adopted at various scales, precisely national, regional, municipal and, at times, even village-centred. But the consistency of contingency plans and their interconnection with the various scales is rarely achieved, especially in Least Developed Countries. The contingency device should not only be organised at various territorial levels, but it should also enable the actors to take coordinated action in case of a disaster. This crucial point is still scarcely discussed in the literature. The scope of this chapter is to present the differences between national and local contingency planning, the relationship between the two scales and the weak points that can still be found in the procedure. Eight contingency plans are compared, namely 5 national (Guinea, Haiti, Madagascar, Mozambique, Senegal) and 3 local (Ecuador, Haiti, Peru). The analysis diagram proposed by Choularton (2007) has been used as a reference for the presentation of the various planning scales, phases, scenarios and considerations on climate change.

Keywords: Contingency plans, Scenarios, Least Developed Countries

10.1 Introduction

In case of a natural disaster, the intervention of humanitarian organisations can make the difference between life and death for thousands of people. These organisations have made considerable progress in preparing interventions through contingency plans that involve “making decisions in advance about the management of human and financial resources, coordination and communications procedures, and being aware of a range of technical and logistic responses” (IFRC 2015). Contingency planning analyses the potential impact of a disaster, anticipates problems that might occur during the humanitarian intervention, and organises the response in advance (CARE 2006) in order to promptly respond to the needs of the population affected by the disaster. Planning the response to the emergency entails discussing the issues and limited resources available with personnel.

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Experience indicates that a prompt response to a crisis reduces its impact. This depends on the expertise and plans of organisations that first intervene in affected areas (Swart *et al.* 2009).

However, the majority of contingency plans put more emphasis on the plan's formulation and on defining actions than on testing, evaluating and refining the plan (UNISDR 2012). Hence, contingency plan assessments that can help us strengthen the contingency device are still very few (IFRC 2012).

The aim of this chapter is to define the main features of contingency plans at the various territorial scales, and the critical aspects that hinder their effective implementation in case of a disaster.

This chapter presents phases, actors and scenarios of eight contingency plans, primarily designed for Least Developed Countries (LDC), namely 5 national (Guinea, Haiti, Madagascar, Mozambique, Senegal) and 3 local (Urdaneta, Ecuador; Tabarre, Haiti, Lima, Peru).

10.2 Contingency Plans

Contingency planning, which is at times defined as emergency planning, specifies how a single organisation, a whole community (from region to village) or a country must behave in case of drought, earthquake, flood, heatwave, landslide or mud flow (WFP 2010). Hence, contingency planning identifies potential disasters and establishes how to manage them (James 2008). This entails simulating the procedures to be followed in frameworks that can become problematic in order to be ready when required.

When an emergency occurs, contingency planning optimises the response (IFRC 2012), which must be rapid, appropriate and efficient (WFP 2010). A contingency plan establishes the management of human and financial resources, as well as the coordination and communication procedures in advance. The plan is a management tool for all sectors that can rapidly and effectively provide humanitarian aid to those who need it in case of a disaster (Ackermann 2013). The time spent on contingency planning is time that will be saved in case of a disaster.

Contingency planning is an ongoing process (Choularton 2007). The plans must be tested and updated to ascertain their relevance, especially in rapidly evolving frameworks (great migratory flows, devastating natural disasters). Contingency planning, the importance of which is readily acknowledged today (Mitchell 2008), must always be performed when there is a high risk of either a disaster or an emergency. In this case, the periods in which natural catastrophes are recurrent (e.g. seasonal event, such as floods, hurricanes or cyclones and drought) must also be defined.

Very often contingency planning is an informal process because it is carried out by individuals or groups of individuals who have not been assigned to do it by any authority. However, formal contingency planning too features a considerable degree

of informality, which is deemed useful, though it follows a commonly agreed and defined process that is converted into an emergency plan (IASC 2007, Choularton 2007). Contingency plans should start by identifying the areas exposed to disaster by the communities concerned (Pasteur 2011).

Climate change increases the hazards to which a community is exposed and, at times, introduces new ones. Contingency planning should carefully consider the changes in progress and forecasts of their future progress when preparation for, response to and recovery from a disaster are defined (Vogel *et al.* 2012).

10.2.1 The Implementation Scale of Plans

Most contingency plans are organised on a national scale in order to ensure coordination and response to very big disasters. At times potential disasters are so vast (hurricanes, cyclones) that contingency plans even involve several countries.

Local governments play a role of primary importance in national plans because, according to the principle of subsidiarity, the administration that is closest to the population with limited access to community services will be required to reduce the gap (UNDP 2010a) (Figure 10.1). Basically, if a local government can efficiently provide a specific service, it should be assigned this responsibility (Wilson 2006). National and local governments can significantly reduce the risk generated by climate change, for instance, with a precisely planned response to disasters (rescue services, emergency services and medical assistance) and reconstruction (assistance to those who have lost their home and means of survival) designed to enhance resilience (Satterthwaite *et al.* 2007).

Figure 10.1: The three territorial levels of contingency plans (IFRC 2012)

10.2.2 Phases of Contingency Planning

Though the major part of humanitarian organisations follow their own guidelines for drawing up contingency plans, they present certain common phases, such as description of scenarios, strategic response, preparation for the plan, implementation of the plan, operations to support the plan, and budgeting (Table 10.1). Local

contingency plans should be consistent with provincial or regional contingency plans (IASC 2007b). For instance, the databases and maps created by regional plans will be useful to locate temporary recovery facilities and evacuation routes on a local scale (UNDP 2008).

Table 10.1: Principal phases of contingency planning (Choularton 2007)

Phase	Usefulness	Notes
Scenario	Provide the foundations for planning Generate consent on the nature of the potential crisis	Simple and general, if there is no specific threat Detailed in case of an emerging crisis
Strategic response	Define the humanitarian responses	Strategy for a simple response, if there is no threat, complex in case of an emerging crisis
Implementation of the plan	Implement the response	Detailed planning in case of a potential crisis
Support for the plan	Identify human, administrative, financial and safety resources	Support is more effective in case of a potential crisis
Preparation for the plan	Identify the actions that can be carried out before a crisis	Preparation is useful when there is no specific threat
Budget	Define the cost of preparing an emergency response	The budget is more useful in case of an emerging crisis, and can be converted into a project budget The budget for preparation activities is recommended in all phases of the process

10.2.3 Defining the Scenarios

All contingency plans are based on the definition of scenarios, namely an assumption of what might occur following a potential natural disaster (IFRC 2012). A very accurate scenario will improve the organisation of the response (UNCHR 2011). Today, there are several methods for defining possible scenarios (Sikisch 1995). Usually three scenarios are developed, precisely the best, the worst and an intermediate one (Choularton 2007) (Table 10.2).

Contingency plans that include scenarios of climate change, such as the ones defined by the IPCC, are still few and are, generally, flood emergency plans. Two examples include the plan for the Colorado River Basin that was affected in recent years by drought (USBR 2014), and Durban's contingency plan in the framework of the climate adaptation plan (Cartwright *et al.* 2013).

Table 10.2: Potential damages for three scenarios in case of drought, floods and earthquake (Choularton 2007)

Scenario	Drought	Floods	Earthquake
Best	Absent	Absent	4.5 Richter's scale, minor damages
Probable	In one part of the country	100,000 disaster victims	6.5 Richter's scale, damages to rural areas and small cities
Worst	In the major part of the country	1,000,000 disaster victims	8.0 Richter's scale, epicentre in a metropolis

The scenario-based approach allows planners to work on various scales for the same potential crisis. For instance, the definition of the National Contingency Plan can resort to information provided by people from various regions. The construction of scenarios also exploits the “step by step” approach to describe the potential escalation of a crisis and of the corresponding measures required. This approach is often adopted to manage refugee flows. When the degree of aggravation of the crisis increases the number of refugees, thresholds are defined beyond which additional measures or more economic resources are demanded. For instance, every scenario of UNHCR contingency plans envisages additional measures (Table 10.3); hence, such a scenario is defined as “step by step.”

Table 10.3: Measures for four scenarios based on the number of refugees (Choularton 2007)

Scenario	Refugees no.	Measures
1	5,000	Record and protect the refugees who stay with hosting families
2	15,000	Open a refugee camp Appoint an Emergency Manager Buy a pickup truck to distribute aid
3	50,000	Open a second refugee camp Increase personnel by 5 units Rent a warehouse
4	100,000	Open a third refugee camp Increase personnel by 6 units Expand the warehouse

10.3 Examples of Contingency Plans

By analysing eight plans we can better understand how they are organised. The plans considered are five national (Guinea, Mozambique, Senegal, Madagascar and Haiti), and three urban (Lima, Peru; Tabarre, Haiti; Urdaneta, Ecuador).

10.3.1 National Contingency Plans

The five plans analysed were drawn up between 2009 (Senegal) and 2013 (Haiti) (Table 4). With regard to the scenarios considered, Haiti's plan (MPCE 2013) and Senegal's plan (UNDP 2009) define scenarios based on the number of hours or days that have elapsed after the event. For every scenario, the plan specifies the activities to be carried out, the people to be mobilised, and the areas to be monitored.

Table 10.4: Comparison of 5 national contingency plans.

Phase of the plan	Guinea (UNDP 2012)	Haiti (MPCE 2013)	Madagascar (BNGRC 2011)	Mozambique (UNDP 2010b)	Senegal (UNDP 2009)
Scenario	Best, probable, worst	Temporal (Day 1, Day 2, ...)	2 scenarios based on the cyclone season	3 scenarios based on the probability of occurrence	Temporal (24 h, 48 h, ...)
Strategic response	For every administrative unit (cluster)	None	Entrusted to the individual clusters	Strategies for each cluster	Based on the risk
Implementation	Detailed timeline of the programme	Estimated community needs and response capacity	Presentation of clusters and logistic, administrative responses	Presentation of clusters, logistic and administrative responses	Logistic and administrative responses
Support	Humanitarian Coordinator	Identification of available local human resources	National Council for Risk and Disaster Management	The UN Coordinator appoints the Humanitarian Coordinator	Appointment of a Humanitarian Coordinator, other human resources
Preparation for the plan	Actions to be implemented for each cluster	Role of national, departmental and municipal operative centres	Actions to be implemented for each cluster in 24h, 48h, etc.	Actions to be implemented, appointment of Cluster Managers	Actions to be implemented for each cluster
Budget	Absent	Detailed	Detailed based on needs and scenarios	Absent	Absent

The plans for Guinea (UNDP 2012) and Mozambique (UNDP 2010b) define three scenarios (better, probable and worst), indicating the procedures to be followed for each of them. Madagascar's plan refers to the different periods of the year, based on the cyclone season.

The strategic response refers almost entirely to clusters, which are either precisely described (Madagascar) or barely outlined (Haiti).

The plans are specifically implemented by administrative and political actors according to the various logistic duties defined in the scenarios. In the case of Haiti, the plan requires an assessment of the needs and response capacity of the various population groups when a disaster occurs.

Some plans define specific figures, such as the Humanitarian Coordinator or the Emergency Manager (Guinea, Madagascar, Mozambique), while others recall the need to mobilise a larger number of people for emergency management (Haiti and Senegal).

As regards drawing up plans, the various clusters are assigned precise roles based on the number of hours or days that have elapsed after the event (Madagascar), or on the scenario (Senegal).

In 3 out of 5 cases, the budget is not specified (Guinea, Mozambique, Senegal), while it is detailed by items for Madagascar.

10.3.2 Local Contingency Plans

The three plans analysed were drawn up in 2011 (Lima and Urdaneta) and in 2014 (Tabarre). These administrative authorities are quite different in terms of dimensions and population, so they are representative of the various types of local plans. Lima has a surface area of 2,672 km² and counts 7.6 million inhabitants. Urdaneta has a surface area of 290 km² and has 29,000 inhabitants (2010). Tabarre is a municipality in Port-au-Prince, about 10 km from the centre of the capital city, which stretches over 25 km² and counts 170,000 inhabitants. It has an international airport, the American embassy and several UN operation sites. Tabarre's contingency plan can be considered an integration to the national one, considering the low quality of the departmental contingency plan. It follows the provisions laid down by the National Contingency Plan and the local scale structure to provide useful and simple tools for the local authorities (Table 10.5).

Compared to national plans, the ones for Lima and Tabarre define the scenarios (weak, moderate and catastrophic), and the objective, response and preparation for each of them (Table 10.6). Urdaneta's plan, instead, describes geographical scenarios that refer to precise territorial sectors. Climate change is not one of the scenarios considered.

Responses either implement national plans and strategies (Lima, Urdaneta), or they are carried out locally (Tabarre). In the case of local plans, the resources avail-

Table 10.5: Summary of the analysis of three local contingency plans.

Plan phase	Lima (COOPI 2011)	Tabarre (COOPI 2014)	Urdaneta (Los Rios Prefectura 2011)
Scenario	According sectors of the city	Light, moderate, catastrophic	High, medium, low
Strategic response	Refer to the Strategic development plan	According sectors and scenarios	Not specified
Implementation	Commissions for protocols planning and coordination	Identification of strength and weakness of institutions and organisations	Operative procedures by sector
Support operations	Emergency communication, coordination and control	Civil protection, local authorities, United Nations	Responsibility assigned to each actor
Preparation	Specified	Specified by sectors	Specified by sectors
Budget	Absent	Absent	Absent

Table 10.6: Tabarre (Haiti). Objectives, response and preparation according to scenario 3.

Scenario 3	Objectives	Response	Preparation
Disaster victims	Evacuate, provide accommodation and food to disaster victims within 72 hours Psychological assistance Economic aid for funerals	Hospitality sites Distribution of water, food, hygiene kits from the second week	Chemical toilets (mobile) Food stocks Agreements with dispen- saries and NGOs
Community	Create access routes Repair damaged streets Drinking water	Human resources of the municipality	List of materials available Establish watering points

able are often limited. Hence, achieving the objectives inevitably depends on actors and competences situated outside the municipality. However, the coordinated action of the municipal Civil Defence Department, municipality, NGOs, committees and local organisations can reduce the impact of the disaster. Constantly updated needs assessment and a training plan can contribute to achieve the goals of the plan.

Regarding the implementation of the plan, dedicated committees that establish communications between actors involved in formal and informal planning procedures are created in Lima. Moreover, coordination protocols are defined to be implemented during emergency response phases. Instead, the actors to be involved in case of a natural disaster (national and departmental civil defence, the United Nations, the

Red Cross, etc.) are specified in Tabarre, taking into account the precarious political and administrative situation. Urdaneta's plan (Los Rios Prefectura 2011) provides a detailed description of the roles played by both public administration and society.

None of the three plans has a budget. In the case of Tabarre, preparation costs are included in the annual budget of the Civil Defence Department, while emergency funds are allocated for the specific situation.

Tabarre's plan has a map. It would be helpful if maps were always present as a useful tool for people who will have to implement the plan.

All the plans analysed neglected disaster simulations that would train the actors.

The national and local plans are complementary. However, a local plan can mirror the national one, but the reverse is never the case.

Figure 10.2: Tabarre (Haiti), 2013. Simulations envisaged by the emergency plan (photo E. Ponte)

10.4 Conclusions

The comparative analysis of 8 contingency plans, especially for LDC, underscored some weak points.

First, national contingency plans that are not associated with departmental and local contingency plans, have a low impact potential. This is often the case of LDCs.

Second, the coordination between local, national and international actors breaks down without a local contingency plan, and so does the prompt efficiency of the response (Choularton 2007).

Third, the lack of an Emergency Manager reduces the efficacy of the response.

Four, neglecting the climate change in progress and its envisaged future progress impairs the quality of contingency plans. This common deficiency is now being improved in the contingency plans of advanced economies.

Five, the lack of physical plans for territories exposed to hazards (Haiti) entails that urban expansion is not managed, natural resources are exploited in an unsustainable manner, and both factors hinder emergency management.

Six, without strengthening the municipal administration with regard to disaster management and without economic aid provided by the national government (Haiti), local governments are unable to independently draw up their own contingency plans.

Though the plans considered present several specificities, the above deficiencies are common in many other Least Developed Countries.

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