

Town Planning Instruments as a Strategy for Disaster Risk Reduction in Nigeria

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Key words: Town planning, Disaster, Disaster planning and Disaster mitigation.

SUMMARY

The string of natural and man-made disasters that had recently devastated some countries of the world underscores the important of pre and post disaster planning.

This paper examined the relevance of Town Planning tools for disaster risk reduction. It discusses the general concepts in disaster planning – disaster resistant planning, disaster resistant communities and mitigation techniques for disaster risk reduction. The uses of town planning tools – development plans and development control mechanisms in disaster risk reduction are presented.

SOMMAIRE

Les événements désastreux, naturels et artificiels qui avaient récemment dévasté quelques pays du monde souligne l'important de pré et post planification pour contrôler des désastres.

Cet article a examiné l'importance des outils d'urbanisme nécessaire pour la réduction de risque de désastre. En général, il discute les concepts pour la planification preventive au risques des désastre - la planification qui résistante aux désastre, les communautés organisées à resister au désastre et les techniques preventive aux risques de desastre. L'utilisation des outils d'urbanisme - des programmes de développement et la mécanismes pour la maîtrise de la croissance des villes pour la réduction de risque de désastre sont présentés.

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1. INTRODUCTION

In recent years, the world have endured several well-publicized natured and man-made disasters causing losses amounting to tens of billions of Naira (Geis 1996) Examples of such natural and man-made disasters include the Tsunamis flood of South East Asia in 2004, the bomb-blast of the World Trade centre in 2001 and lately the Hurricane Andrew that smashed Louisiana and, its environ in 2005. Here in Nigeria the bomb-blast of the Ikeja Cantonment armoury of 2002 is still fresh in our memories.

Both the natural and man-made disasters occur as a result of the failure of the built environment to structurally, functionally, environmentally and socially resist the physical forces of natural disasters and to provide the functional support necessary for recovery.

The after effect of the natural and man-made disasters are usually in the form of loss of life, property damage and socio-economic disruptions.

How well have governments and non-governmental organizations fared in mitigating disasters and the attendance losses? What strategies for disaster reduction could be adopted to the situation in the developing countries like Nigeria? It is along this framework that this paper attempts an examination of the relevance of town planning tools as a strategy for disaster reduction in Nigeria.

2. THEORETICAL ISSUES

In this paper, three concepts are recognized and discussed. These are – disaster resistant planning, disaster resistance communities and mitigation processes for disaster risk reduction.

Disaster resistant planning could be understood as a disaster risk reduction approach. The disaster resistant planning is an approach used for minimizing the damage and disruption from disaster. It embraces a clear understanding of the relationship between how we manage growth and how we plan and develop our communities (the neighbourhoods, buildings, infrastructures and other systems and components). Disaster resistant planning also accommodates how we relate development with the natural environment – the capacity of the environment to resist and to minimize the result of the disaster.

A disaster resistant community is obtained when the goals of disaster resistant planning is achieved. Disaster resistant communities are sustainable communities in the local context. A sustainable community can be defined as one that uses its resources to meet current needs while ensuring that adequate resources are available for future generation (UNCED, 1987). It

seeks improved public health and a better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation and promoting efficiency and developing local resources to revitalize the local economy. A sustainable community formulates goals that are rooted in a respect for both the natural environment and human nature and that calls for the use of technology in an appropriate way to serve both of these resources.

Mitigation processes for disaster risk reduction could be seen as a means of institutionalizing the appropriate principles and techniques into the daily actions that local governments are required to take as apart of their on-going planning and development responsibilities (Geis 1996). The principles and techniques that are needed to be institutionalized by the local government may include town planning tools like the adoption and implementation of city master plans and some development control mechanism. Mitigation is a process of the decision made and action taken at the local level to minimize results of disaster events on human settlements. It is concerned with keeping a hazard from becoming a disaster. Mitigation is charged with planning and building the various systems and components of the built environment to minimize loss of life, damage to property from the actual event and the subsequent socio-economic disruption. It is concerned with incorporating the best hazard resistant designs into the building and other facilities. It must also ensure that the very best economic, social and environmental principles of sustainable development be implemented at the same time.

Different mitigation approaches for disaster risk reduction or disaster resistant planning are discernible. Sheikh (2001) identified three major integrative approaches. These include – integrated planning, local planning and integration and participatory planning approaches. While Sheikh (2001) suggested approaches looks like a workable localized planning strategies, Geis (1996) suggested a more holistic practice effective disaster resistant planning approaches. These embrace: sustainable development planning, community investment and pre-event planning.

The pre-event planning approach looks more relevant to this paper. It is on this note that Town Planning instrument as a strategy for disaster risk reduction is being examined as detailed below.

3. TOWN PLANNING TOOLS FOR DISASTER RISK REDUCTION

This section discusses the principle of Town Planning, Town Planning tools and the relevance of Town Planning tools in disasters risk reduction.

3.1 What is Town Planning?

Planning can be viewed as a method of decision making that identified goals and ends, determines the means and programmes which are thought to achieve these ends. Accordingly, town planning can be defined as the art and science of ordering the use of land character and the siting of buildings and communication routes so as to secure the maximum degree of

economy, convenience and beauty. Therefore the desirable end of town planning endeavour is an aesthetically pleasing environment.

Town planning is a future oriented problem solving strategy within a defined area. Town planning is tailored to set goals based on the images of the desired future. Policies are designed and plans are implemented to guide the system towards the goals, or to change the existing system if it cannot achieve the goals.

3.2 Town Planning Tools

There are two key tools in Town Planning endeavours. These are – Development plans and development control mechanisms.

3.2.1 Development Plan

A development plan is called by different names – “General Plan”, “City Plan”, “Master Plan”, or even “disaster Plan”. A development plan is defined as the official statement of a municipal legislature body, which sets forth the major policies concerning future physical development of a settlement.

A development plan is a policy instrument, it must provide basis for fulfilling the yearning and aspiration of the people.

A city is a corporate entity. The local government has control of the city- its nature, extent and manner of development. Therefore the development plan provides the legal and technical instrument for such local government control.

3.2.2 Development Control Mechanisms

The development control mechanisms provide tools through which planning goals and ideals are achieved. In relation to disaster risk reduction, it provides the tools with which disaster resistance plans are prepared and implemented.

Robert (1974) identified two technical devices used in development control processes. These are land – use zoning and planning standards. The planning standards also have two main divisions. These are the prescriptive and the regulatory standards. The prescriptive standards are the guides or specifications used in dimensioning in the preparation of a disaster risk reduction plan or any development plan for that matter.

Planning standards are used in Town Planning as recognized model for imitations (Keeble, 1976). They are legislated standards which in most cases are mandatory and inflexible. They serve as tools or specifications before building operations can be approved under the law. Examples of the planning standards are residential density standards, plot ratio, setbacks from the stream, rivers or roads, airspace standard car parking control standards and highway standards among others.

Above all, the planning standards are entrenched in the building and sub-division regulations as well as the sanitary and zoning codes of local government councils for enforcement.

3.3 The Relevance of Town Planning Tools in Disaster Risk Reduction

Human settlements are dynamic. They operate like living organizations. They have origin, growth, decay and regrowth.

Cities and towns like any human settlement are subject to various types of forces, physical, economic, social and administrative which influence their forms and structures. For instance, disaster of any nature whether natural or man-made could exact so much force as to disrupt the socio-economic and political balance of the settlement; cause property damage and loss of human life. The application of town planning tools such as contained in the building regulations and sub-division bye-laws of the local government could help to coordinate the various forces and consequently ensure a disaster free environment.

Therefore, the application of town planning principle and indeed the town planning tools in pre-event planning could be seen as a future oriented problem solving strategy which recognizes the relationship between planning, preparedness, response and recovery.

In summary, the relevance of Town Planning in disaster risk reduction is that it allows for a futuristic mental projection of potential disaster and then allows us to formulate how we can mitigate it before it occurs.

4. CONCLUSION

This paper has attempted an examination of the relevance of Town Planning instruments as a strategy for Disaster risk reduction in Nigeria. It highlighted the concept of disaster planning and presented the uses of various town planning tools- development plans and development control mechanisms for disaster risk reduction. It emphasized the futurist element of town planning as the most relevant for disaster risk reduction.

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