

# Framework of Inclusive Governance as Management Tool for Mitigating Disaster Prevalence in the United Arab Emirates

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## ABSTRACT

The problems of disaster are apparently about the failure of the present top down emergency management style which is being practiced by the UAE's government. The government intended to address the enormity of natural disasters' challenges which are occurring in the country. It is therefore the intention of this paper to propose model of inclusive governance as management tool for reduction of disaster prevalence in United Arab Emirates. Basically, the study made use of previous literature review to drive home its argument on the precarious state of disaster in the region and the need for mitigating measures. The study concludes by proposing model of inclusive governance as a panacea for disaster prevalence and the need for citizens' participation as a mediating variable between the influencing factors of disaster and successful disaster management. The policy implication of this study is that its implementation is expected to drastically reduce disaster prevalence as well as opening new avenue for future research.

## Keywords

Disaster mitigation, Inclusive governance, Management tool, UAEs

*Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020*

## 1. Introduction

Rapid and unsustainable development can lead to disaster either naturally or man-made disasters. Usually, careless development resulted to natural disasters. Generally, Citizen are not relating natural disasters from development pathways which requires governing the development in terms administration and implementation. Hence it requires to investigate the impact of development and natural disasters which should be treated as inseparable [1-4]. Pertinently, the continual occurrence of naturally development-driven disasters is associated with either infrastructure development or construction [3]. Unstainable development activity resulted to turbulence ecological and geological condition, thus usually trigger the occurrence of natural disasters of varying sizes [5]. This trend has becoming worse due to unprecedented demographic burst. Resulted from uncontrolled urbanisation, negative rural-urban migration and also increase in natural growth rates. This has caused unprecedented developmental ambitions by government to cate the increase of population without any conscious attempt to evolve a veritable platform that involves citizens in the development scheme [6]. The increase of construction and development works it will alter the ecological and geological of UAE

environment [3]. This is due to huge effects from several UAE constructions which may lead to natural disasters [3-4]. The prevalence of natural disasters affecting UAE may soaring above the global threshold [7].

Unfortunately, the entire government's emergency management approaches are using a top-down style. This style excludes citizen participation in development and emergency management arrangements [8-10]. It is regrettable to note that the exclusion is a deviation in the development-disaster-emergency relationship [11-13]. Furthermore, typical style of administration and implementation of the development have been using top-down method [7]. This style creates disconnect between the government that act as executors of development initiatives which trigger natural disasters and its Citizen [2]. This trend is causing problem which hamper the feedback necessary for ecological and geological relationship [14]. It activates the occurrence of natural disasters of varying sizes [15-16]. The situation has been made worse by uncontrolled urbanisation that needs to cater the increasing population [17-19]. Therefore, in this important trend this study is aimed at shedding light on some cross-cutting issues. In essence, this study seeks to deeply understand the UAE's disaster profiles. Both efforts in this research are investigate in the

United Arab Emirates on disaster management issues. To order to reduce the occurrence of disasters in the UAE, it is therefore imperative to recognize the driving factors that militate governance. The research attempts to resolve the vulnerability and weakness of the current arrangement for a catastrophe. Essentially, the efforts of this study were aimed at actively creating a contemporary style and culture of development, as well as institutionalizing its functional procedures, so as to reconfigure the former model of governance of development into a comprehensive model. The new model's architecture and aesthetics are in line with the UAE government's long-term dream of permanently addressing natural disaster problems affecting Citizen. Most interesting is the fact that this development-based model is supposed to be more flexible, reliable and detailed method for emergency management to minimize the incidence of natural disaster in the oil-rich UAE peninsular. This research fundamentally enhances the framework of government and gives it a new tool for implementing emergency management. This new model is expected to reduce the prevalence of natural disasters in the UAE. These and other questions have therefore been answered through extensive theoretical and empirical endeavours. This study identifies the influencing factors that cause disasters and as well as the factors that influence successful disaster management, including;

**A.** Influencing Disaster Management Factors (IFDM)

- i. Institutional Factors (IF),
- ii. Environmental Factors (EF),
- iii. Human/Technology Factors (HTF),
- iv. Natural Factors (NF),

**B.** Citizens' Participation in Governance on Development (PPGD), and

**C.** Successful Disaster Management (SDM) through the Influencing Factor Governance (IFG) model.

## 2. Disaster Management

Disaster management is a coordinated processes of planning, organising, coordinating and implementing actions which need effective handling that impacted to Citizen [24]. Disaster management can be classified into 3 key phases which are mitigation/preparedness, relief and reconstruction. Mitigation or risk reduction

actions involve structural and non-structural procedures to limit the adverse impacts of natural hazards [25-26]. While preparedness are activities and measures taken in advance to ensure effective response to the impact of hazards. This includes the issuance of timely and effective early warnings and also for temporary evacuation of Citizen and property from the threatened locations [27]. Relief phase is the intervention during or after the disaster for life preservation and basic subsistence needs of those affected Citizen [28]. Finally, reconstruction is rebuilding the damaged living conditions of the affected Citizen/community for long term sustainability [29].

Knowledge management process is where the knowledge is created, shared and utilised [13]. Abundant knowledge of risk and vulnerability to hazards that existed is not fully utilised at all level of organisations [4]. Experienced through Asian tsunami, it was noticed the lack of knowledge management was apparent. Several organisations seem to not be able to capture, retain and/or re-use the learning from similar operations [23, 24]. This brought about wasting time regarding setting up and managing the development and construction projects within the tsunami recovery operation [8]. [30] concluded that, disaster response is dynamic and therefore decision makers need to get updated information/data quickly on the current emergency situations. Disaster response is time-sensitive with minimal delay in decision making and response operations. Therefore, any delay or issue in data collection, access, usage, and dissemination affects the negative impacts on the quality of decisions and hence the quality of disaster management. All this features the significance of managing knowledge distribution and management within the context of disaster management.

## 3. Factors Influencing Disaster Reduction

Disasters had occurred around the world due to natural or man-made causes and has resulted to the loss of lives, employment; damage to the physical infrastructure and environment [23-30]. This contributes to the realization of factors that either contribute to disasters or affect the effective management of disasters. The National Institute of Disaster Management [19] declared that, once disasters occur, hazards reach vulnerable conditions. They include fire, floods, earthquakes

and droughts that are part of the earth's natural cycles. The NIDM assumes that such a society can face catastrophic situations that require emergency relief and assistance to save lives and protect the environment when such hazards threaten vulnerable societies. In other words, natural disasters may have a life-altering effect on Citizen, families, and culture. Moreover, studies have shown that the manner and way in which man makes use of the environment has been found to be capable of causing disasters in the form of rapid development. This is also listed as one of the key causes of disasters in the UAE. The NIDM stated that land use and land cover changes are eroding natural buffers across the globe and shielding communities from hazard risk, while also taking into account the relationship between environmental protection and disaster mitigation. According to the report by NIDM, these same changes also erode the capacity of Citizen to recover from disasters. Other environmental developments, such as anthropogenic global warming, are, however, promising to create new problems for the protection and sustainability of societies around the world. The environmental factors are, inferably, capable of increasing the effects of a disaster. Examples include deforestation and weak agricultural systems that have been shown to be able to accelerate the adverse environmental impacts of a storm or typhoon, resulting in landslides, flooding, silting and mixture of ground/surface water, as demonstrated by the 2004 Haiti and Philippines [31] hurricane and storm tragedies. It can be derived from the above that nature, human actions, activities technology and the environment are capable of having an effect on successful disaster management.

More significantly, it has been found that the government and its agencies have a greater effect on disaster prevention or management. This was identified in order to represent the intensive use of land (construction projects) to maximize the production of revenue. This is typically done without adequate recourse to its adverse environmental effects and/or its role in the organizing or establishing of emergency programs, as well as codes and regulations for disaster prevention. Factors to be addressed in disaster management [33] are defined through a literature survey and grouped according to their characteristics into eight categories: technological;

social; environmental; legal; economic; operational/ managerial; institutional; and political. For all forms of disasters, these factors are common, covering all three stages: mitigation/preparedness; relief/recovery; and reconstruction/rehabilitation. Technological factors involve issues related to or involving the implementation of scientific advancements, including any tool, technique, product, process or method for the benefit of disaster management. While the factors related to human society and its members are social influences, the environmental factors however are related to the natural ecological system. Legal factors include law-related aspects, accepted regulations, and disaster management legislation. It is possible to divide economic factors into two: long-term measures of economic planning and financial factors. Economic planning measures cover the aspects of the product's development, delivery and usage of goods and services. Under the financial sub-category, aspects related to monetary assets are covered. Problems related to skills, competencies and procedures include operational/managerial factors. Although institutional factors include aspects related to institutions and organizations in disaster management, political factors consider issues related to politics or political parties.

#### **4. Citizen's Involvement in Disaster management**

##### **4.1 Introduction to Citizen's Effects**

The importance of citizen's participation in any planning process cannot be over-emphasized. It has been touted as one of the main reasons why many development programs and policies end in abandonment or bad execution, due to lack of it being attributed. It should be a common feature in acknowledging the value of citizen engagement and encouraging awareness that the success of a plan or initiative (its potential for implementation) depends on the participation of Citizens; it depends on the Citizen's mandate. Therefore, if any public initiative or legislation is to be successfully completed and adopted, awareness of the value of citizen endorsement should be increased. As a matter of fact, no proposal on paper is completely successful unless it becomes a plan or initiative for citizens, meaning that the active and enthusiastic support of citizens in general must be the cornerstone of every policy or plan.

In order to demonstrate the required local commitment to potential plans and policies. Members of local jurisdictions need to be present to address the entire situation for the possibility of establishing an effective relationship and the possibility of developing a citizen-oriented plan.

The mission statement of any citizen-oriented project should be a collaboration and a strategy to put together groups involved in community planning in order to achieve collaboratively the common goals of physical and comprehensiveness. The political vision of a citizen-oriented policy should include: an allowance – with a unified voice – that can leverage collective bargaining power more effectively than the efforts of individual communities; a partnership and plan that ensures that local planning or project entities do not work against each other by implementing fragmented projects that hinder development effectiveness for themselves and their neighbours; a partnership and a plan that responds to the needs of the Citizen living in each community.

These vision and goals need to be turned into an agreement to enable implementation. Indeed, the concept of citizen-oriented policies is based on the idea that "whoever wears shoes knows best where they pinch." The citizens need to be in a collaboration with the mandate in order for the plan to be effective.

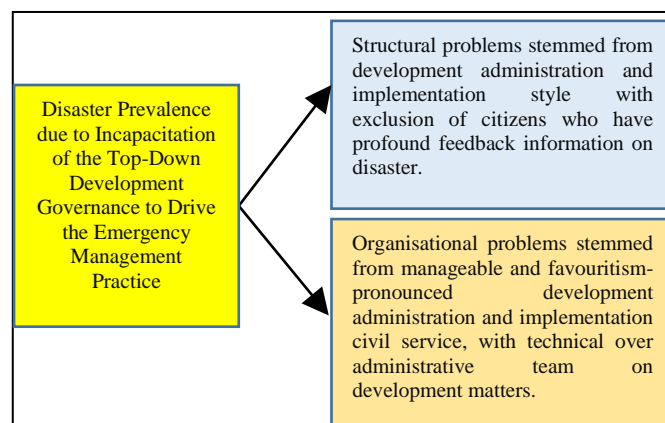
It can be concluded from the above that the implementation of the values of citizen's involvement in any project planning, development, and administration, is capable to transform disasters resulting in heavy construction developments in the UAE.

## 4.2 Community-based Disaster Management Approaches

Over the last few years, the idea of community-based disaster management has been promoted around the globe across a variety of initiatives. These systems can be divided into three groups. (1) Category A: Emergency prevention and recovery associations funded by firefighting organizations. The trend for firefighting agencies to recruit volunteers for emergency response activities has increasingly been accepted ever since World War II due to shortage of manpower. Few charitable organisations have been formed by the National Fire Agency (NFA) in which

volunteer fire fighters became official in 1998 in order to assist in fire suppression and rescue. (2) Category B: When official emergency personnel couldn't provide immediate assistance, residents of communities started to help each other after catastrophic disasters [33]. (3) Category C: In Taiwan and Japan, community-based disaster management programs were erected after disasters and started to promote community-based disaster management concept. Several academic groups, referring to Japan's reconstruction experience after the great Hashin–Awaji Earthquake and FEMA's Project Impact, began promoting national use of the concept [34].

This study is constructed with full recognition of the implications of the existing single-scoped, top-down approaches to development administration. These problems are unsolved over the decades, due to the disjunction of the challenges, with the first, which is natural and most often triggered by the second, which is human-driven by nature. Thus, Fig.1 further sheds more light on the specific challenge(s) to be examined, which is by providing these challenges with solutions, via the model in this study.



**Fig 1- Structure/Organisational Problems Affecting Development and Leading to Natural Disaster Occurrence**

Therefore, from Figure 1 it can be said that problems on development-driven, naturally-occurring disasters are structure-organisational in nature and are thus stated:

Several structural problems stemmed from development administration and implementation style, with many exclusions of citizens who have direct experience of the disaster profile. These citizens who can provide the much-needed



feedback information are vital to curtail the occurrence of these natural disasters.

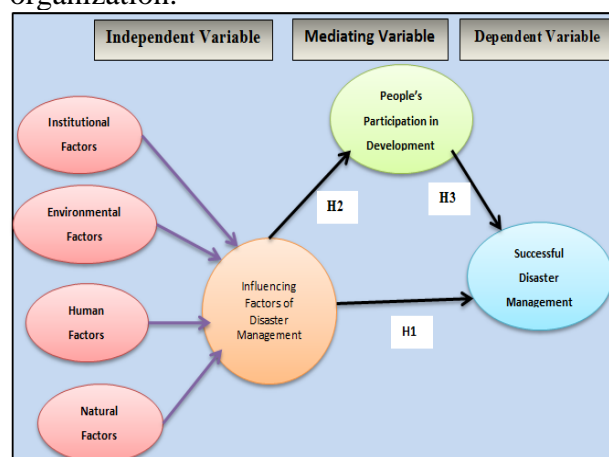
Several organisational problems stemmed from manageable development administration and implementation civil service, with technical problems from the administrative team on development matters.

### 5. Proposed model Of Inclusive Governance Model

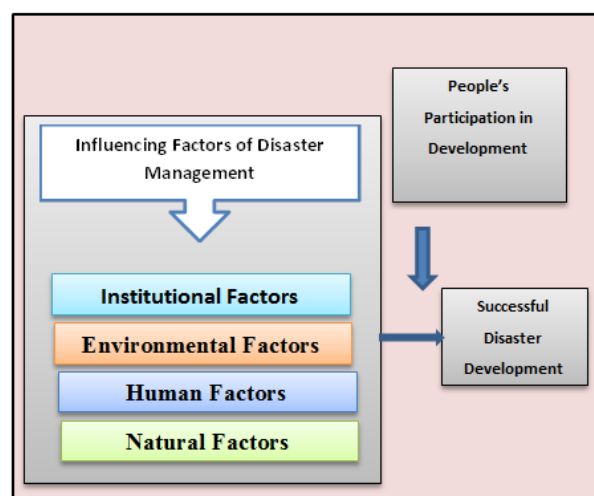
One of the key fundamentals discovered in the course of reviewing related literature for this study, are the various efforts made to formulate a sustainable model for the participation of citizens, in governance development towards a successful disaster management [35-37]. As a matter of fact, there had been a good number of frameworks on the necessity for citizens' participation in development projects as a disaster management tool. However, there seems to be lack of studies on testing the mediating effect of the citizens' participation in governance development for project disaster reduction. Hence, this study is composed to bridge this gap by proposing an inclusive development governance model as an emergency management tool for disaster occurrence in the United Arab Emirates. This model is considering the mediating effect of citizen participation in governance on development between the influencing factors and successful disaster management. The model is set out to determine the causal effect between influencing factors of disaster management and successful disaster management (direct effect). This is also between the influencing factors of disaster management and citizens' participation (indirect effect) and the causal effect between citizens' participation and successful disaster management (indirect effect). In this case, the influencing factors of disaster management (IFDM) stand as the independent variable. The citizens' participation in development (CPD) as independent and dependent variable, and successful disaster management (SDM) as a dependent variable. Fig.2 and Fig.3 gives the graphical presentation of the model or/and framework.

The philosophy behind this model is that from the literature, there are influencing factors on successful disaster management. This proposed model is therefore meant to find the influence of the causal effect between the independent variable

(Influencing Factors of Disaster Management) and dependent variable (Successful Disaster Management). With the inherent benefit of Citizens' participation in governance in relations to physical development matter, it is believed that it will mitigate the devastating effects of disaster occurrence. This means that the government (UAE) as a matter of urgency should involve the public and let their voice count on matters relating to public developments. Apart from involving the public along with the projects, the government also holds the responsibility in the face of any disaster stemming from any construction projects and developments. The public could also be represented through NGOs, religious bodies, professional bodies, and any other local organization.



**Fig 2 - A proposed model of Inclusive Governance Model for Reduction of Disaster Prevalence**



**Fig 3 - Inclusive Development Governance Model (IDEGOM)**

## 6. Conclusion

Several studies had been conducted on the issues of development regarding to its administration and implementation. However, these studies did not considered the holistic approach towards the understanding of how the daunting challenges of development governance from the single-scoped-top-down approach. This is because such approach invariably could not satisfy the expected outcomes to the stakeholders. In fact it had cause havoc from this development governance style which is non-inclusive in design and hence trigger development-driven disasters. Thus this paper presents a holistic governance of development administration and implementation devices for the entire UAE. Realistically, it is proactive, preventive and paradigmatic concept as well as synergistic in nature and context with inclusive scope. The aura and effects of this concept will reduce the prevalence of natural disasters from the development. This proposed concept can saves lives and properties from all risks of loss which were happening because of the post recovery style of past emergency management efforts. The limitation of this paper among others includes inability to present the empirical report of analysis along with the current article. Indeed, this is treated as an opportunity for future research. The policy implication of this study is that its implementation is expected to drastically reduce disaster prevalence as well as opening new avenue for future research.

## Acknowledgement

Authors would like to thank Universiti Tun Hussein Onn Malaysia.

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