Case Study

Leadership abilities, skills and knowledge in building disaster resilience and response

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Leadership is essential to building resilience in disaster management and response. Authors assessed the abilities, skills and knowledge of leadership in critical national institutions in Ghana in relation to disaster resilience modalities and emergency response. Authors also determined if there is correlation between the slow integration of disaster risk reduction modalities into national developmental agendas and leadership capacity. This study consisted of literature and documentary review. Authors used purposive sampling to identify subject institutions that had indicated their willingness to participate in Semi-structured Key Informant Interview. The result shows there is a paucity of research on the role of leadership in disaster and emergency intervention in Sub-Saharan Africa (SSA) vis-à-vis the integration of Disaster Risk Reduction (DRR) into national agenda. The current national preparedness level is pedestrian. More needs to be done to build the resilience of the population by first building the capacities of leadership in DRR. The integration of DRR into development policy is slow in SSA because leadership lacks operational capacity. This has led to confusion about what DRR is. Therefore it is concluded that leadership capacity needs to be strengthened through continual professional development and formal education in order to build disaster resilience and improve response.

Key words: Resilience, leadership, disaster and emergency response, sub-sahara Africa, hyogo framework, millennium development goals, disaster risk reduction, Ghana

INTRODUCTION

Leadership is essential for disaster and emergency intervention, particularly for mass casualty incident and to the building of the resilience of the community (Marcus et al., 2006; Bass 1995, 1985). To address this reality; and as a general concern in many fields of social and commercial activities; there have been many calls as to how a leader should have been formed or ought to be, and the traits he should have (Wren, 1995; Bass, 1990; Cronin, 1984; Burns, 1978). Other researchers have called for various types of leaderships, including 'meta-leadership' (Marcus et al., 2006). A meta-leader, is defined as one who possesses the ability ‘to guide, direct, and who carries momentum across organizational lines that develops into a shared course of action and a commonality of purpose’ among people and agencies that are doing more or less the same work (Marcus et al., 2006; House and Shamir, 1993; Caldwell et al., 1990). There is another sub-type of leadership derived from the concept of Total Quality Management (Feigenbaum 2007; Puffer and McCarthy, 1996). ‘Quality management is where there is “a basis for guiding, empowering and supporting the constant pursuit of excellence by the employees throughout the organization” (Feigenbaum, 2007). Others have advocated for a transformational type of leadership which searches for ways to help motivate followers by satisfying higher order needs and fully engaging them in the process of work (Datche and Mukulu 2015; Mumford et al., 2007; Osborn et al., 2002). There is also a significant number of researchers
who advocate for charismatic leadership in crisis management (Davis and Gardner, 2012; Hunt et al., 1999; Pillai and Meindl, 1998; Pearson and Clair, 1998). As basic traits, a charismatic leader is supposed to possess extraordinary gifts. For these gifts to be displayed; there should be some form of crisis that seems to engage the attention of a large segment of the population (House et al., 1991). In attending to the crisis, he should have a revolutionary solution to the crisis (William et al., 2009). Most importantly, perhaps, there should be followers who believe in him and are attracted to the qualities of the person. To consolidate the previous gains in establishing him as a bona fide charismatic leader, there should be a validation of his gifts through repeated successes (Davis and Gardner, 2012; Trice and Beyer, 1986; Weber, 1947).

What all these shades of leadership boil down to, is perhaps, what Marcus et al. (2006) called the meta-leader: a person who “connects disparate groups by aligning core interests and motivations, redefining success not as a silo-driven objective but rather as a product of the combined action and interaction of the multiple silos working in a coordinated synchronization” (Marcus et al., 2006; Kirkpatrick and Locke 1996).

It appears many multinational policy frameworks acknowledge the lack of capacity on the part of leaders who are supposed to implement the protocols as intended and deliberately set out goals and benchmarks to be attained. For our topic, the intellectual and legal framework that has prescribed the modalities for disaster risk reduction and management is the Hyogo Framework for Action of (2005-2015). To strengthen leadership in disaster risk reduction, the Third United Nations Conference on Disaster Risk Reduction: Post-2015 framework for Disaster Risk Reduction, there is the need for a multi-stakeholder engagement on the pertinent issues affecting risk identification and reduction, emergency preparedness and intervention for such a broad based protocol (GFDRR, 2014; Hunt et al., 1999; Pillai and Meindl, 1998; Trice and Beyer, 1986 and Weber, 1905). In order to understand the nature of the challenges peculiar to Ghana and the Sub-region, this assessment was initiated to evaluate the abilities, skills and knowledge of leadership in critical national institutions in relation to disaster resilience modalities and emergency response.

**METHOD**

**Sample and Procedure**

Authors used a mixture of quantitative and qualitative data approaches. To conduct Key Informant Interviews among a pre-select group of critical national institutions engaged in various aspects of disaster risk reduction and resilient building, 20 questions were developed (Spector, 1994). Authors sought and obtained Ethical Clearance. The Key Informant institutions were written to, to seek internal approval. Key Informants were selected based upon the following: Experience with DRM and DRR practices, Significant amount of experience in senior leadership level; Be working in government, academia (Wayne Blanchard, 2003); NGO, Civil Society Organization, Civil Society, the private sector or media (Quarantelli, 1989); Local Authority Leadership experience; Local community Leadership (Sync Consult 2007). The sample of the key informants came from 28 critical national institutions. Although there were occasional novel contributions from many of the key informants, after 28th institution, the researchers concluded that saturation had been reached. Authors were confronted with several challenges. Since authors targeted top leaders within the selected organizations and institutions, it was difficult getting them to conduct the Interviews on first visits even though they were informed prior to the visit. Many of the interviewees didn’t want an audio recording of the interview. This is because many of these top positions are in fact political appointments, which made them weary of talking to ‘outsiders’ on audio recorded device. Without the recording they can always prevaricate to protect themselves, if need be, perhaps. About half of the questions asked respondents to rank their responses on a Likert-type scale with 1 being the least and 5 being the highest (Likert, 1967). Computerized content analysis was used based on standardized coding. This allowed easy manipulation of the texts, although it also provided rather large qualitative material and options, despite the sterility of the text. The data was further analyzed using STATA version 11 to conduct Two-sample Wilcoxon rank-sum (Mann-Whitney) tests. Finally, factorial logistic regression analysis producing results in terms of odds ratio (OR) and 95% confidence intervals (CI) was performed to investigate and explain the significance association between a dichotomous response variable and two or more categorical independent variables. The responses were to test if the practitioners’ “knowledge of disaster resilience” could determine respondents’ ranking choices. It was assumed that appraisal by the practitioners of what Disaster Resilience means was important in the gap assessment and analysis, if any. Examples of Responses were: “The ability of individuals and communities to prepare and respond to disaster when they happen”; “Ability to recover from disaster and being able to recover better and stronger”; “Building systems to withstand disasters when they occur”; “The ability to withstand disaster and recover from disaster when it happens” and, “Capacity to handle disasters when they occur”.

**Literature Review**

Authors searched databases such as PubMed, Medline and others for reports, editorials and published papers in the English Language. A search on Goggle Scholar on
Leadership attributes for Emergency Management yielded over 1,110,000 entries and Qualities of effective leadership in crisis yielded 41 million results but only about 20% were relevant in each instant. This created a huge challenge of having to spend an inordinate amount of time to conduct rapid assessment and select the most pertinent of the papers. Hand searching of selected printed journals and grey literature such as technical reports, conference proceedings and workshops were also assessed. To narrow the search, the authors used search combinations of Leadership for emergency management at the communal level; or Knowledge and abilities of leadership in managing district, regional and national disasters and emergencies; National template for Health and other emergency interventions, Ghana only; Legislative framework and guidelines for leadership conducting emergency interventions, Ghana, only; traditional rules of roles of leadership in disasters and emergencies; examples of good traditional leaders in emergencies. The inclusion criteria for the literature review were any report (scholarly paper, opinion, editorial, book chapter, internal post-operations reports, and annual reports) on exemplary leadership in emergencies or disasters. Papers dealing with the need for leadership in our lives (Burns, 1978); presidential charisma and leadership in crisis (Davis and Gardner, 2012); or characteristics of quality leadership (Davis and Gardner, 2012; Yukl, 1998) were also accessed. If such a case, book or report addressed the positive traits of good leadership such as decisiveness, autocratic, goal oriented, open-mindedness, flexible and adaptive, transactional or resilient leadership, it was included in the review (Davis and Gardner, 2012; Yukl and Mahsud, 2010; Winder and Draeger, 2006; Burns, 1978). The authors reviewed the selected publications, briefed them and identified the position taken in the publication or report in relation to the objectives. The authors summarized the findings into their respective units, and interpreted them based upon the authors’ skills, knowledge and specialization in public health, policy, disaster risk reduction and law.

RESULT

No data was collected on the basic demographics of the key informants that participated in this exercise. There was a great deal of reticence on the part of the key informants about giving their ages. It is confirmed here that each key informant was at the rank of director or above in the Ghana Civil Service. Each occupied leadership position with managerial or operational responsibilities in both peace time and in times of crisis and can be considered as a practitioner in their chosen fields. In order not to derail the entire exercise against the demand for their ages and other personal information such as the number of children, the authors focused on the objective of assessing their knowledge and abilities. Each of the key informants was at least 35 years or older.

Top 5 hazards/threats (manmade and natural) that afflict Ghana

The key informants were asked to rank the top five hazards or threats facing Ghana, whether the hazards were manmade or natural disasters and emergencies.

In Table 1, most of the key informants indicated that road traffic accidents were a major threat facing the nation. This was followed by cholera, where 18 out of the 28 key informants rated it second to Road Traffic Accidents
(RTAs). However, the greatest threat was flooding with 28 out of 28 key informants rating it as such.

**Familiarity with the term “disaster resilience”**

The key informants were also asked about their familiarity with the term disaster resilience. This was because appraisal of the term was important in assessing their awareness or knowledge. About 56.7% of the respondents said they were familiar with the term while another 43.3% said no. Those who were familiar with the term defined it variously as:

a. The ability of individuals and communities to prepare and respond to disaster when they happen;
b. Ability to recover from disaster and being able to recover better and stronger;
c. Prevention of disaster;
d. Building systems to withstand disaster when they occur;
e. The ability to withstand disaster and recover from disaster when it happens;
f. The ability of the community to handle disasters;
g. Something to mitigate or prevent disaster;
h. Responding to disaster calls with the availability of resources;
i. Capacity to handle disaster when they occur;
j. How better an individual in terms of preparation and response to disasters;
k. How best we can safe guard disaster in our community;
l. The people in the community being able to mitigate and deal with disaster;
m. The community ability to prepare and respond to disaster situations and becoming more improved in their living standard than before;

**The top 5 key Stakeholders in disaster risk management**

Respondents were asked to rank the top 5 stakeholders in disaster resilience, disaster risk reduction and preparing the communities against shocks and stresses such as cholera and flooding. The following is how the ranking was staggered. The practitioners or key informants ranked the National Disaster Management Organization with a cumulative score of (15.9) as first among equals in terms of importance to disaster risk management. This was followed by the National Fire Service with an overall score of (13.1). The third stakeholder was Health with (5.7) overall score and then the National Ambulance Service with (5.1) and the fifth place was the National Red Cross with an overall score of (4.0) as shown in Table 2. The Police and National Security apparatuses were ranked by the practitioners at (2.8) respectively but Defence at (1.1), though they should have occupied a more elevated ranking. This seems to suggest that the practitioners lack either actual experience with crisis intervention or even experience in Table Top Exercises in crisis intervention.

**Assess the Resilience of society at the National Level**

The key informants were asked to assess the resilience of the society of Ghana. On a scale of 1-5, 1 being lowest and 5 highest, they were asked: How resilient do you think this country is as a society? They were also asked to: please explain the greatest obstacles to resilience and provide recommendations as strategies to address these obstacles. Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

a. Preparedness, lack of information, early warning system not available, NADMO not very much equipped, NADMO must practice prevention measures.
b. People don’t know the emergencies numbers to call.
c. We need to be discipline and responsible as people.
d. The greatest problem is attitudinal and irresponsibility. Inadequate preparedness. Lack of public education.
e. We wait for disaster to strike before we do something about it and are not quick in response to disasters.
f. Roads are such that they cannot withstand heavy rainfall. Not enough measures to ensure food storage.
g. Food storage is challenge. Poor supply of logistics.
h. It takes a long time to repair things that breakdown during disasters.
i. The magnitudes of the disaster situations are not that big but because we are not resilient as a country we are easily exposed.
j. We don’t seem to prepare until disaster happen.
k. The districts must be equipped to handle disaster at the local level. Stakeholders have to be equipped.
l. People must know about the existence of NADMO and other stakeholders.
m. We are not resilient as a country because anytime the rains come, many people are displaced. We are not disaster conscious at all every year the same flood exposes how vulnerable we are.
n. Indiscipline is an obstacle in our society. Indiscipline on our roads is the major cause of road accidents. The MTTU should do more of public education. Some years back one could see more adverts on TV about road safety measure, but it is not common now.
o. Absence of standard operational procedures.
p. Lack of defined role of stakeholders.
q. We need to plant more trees to stop wind storms.
r. Ghanaians are not discipline because we throw rubbish anywhere, drive anyhow not obeying traffic
<table>
<thead>
<tr>
<th>Key stakeholder</th>
<th>1&lt;sup&gt;st&lt;/sup&gt;</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt;</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt;</th>
<th>4&lt;sup&gt;th&lt;/sup&gt;</th>
<th>5&lt;sup&gt;th&lt;/sup&gt;</th>
<th>Overall</th>
</tr>
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<td>Ambulance services</td>
<td>0</td>
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<td>2 (6.7)</td>
<td>0</td>
<td>1 (3.6)</td>
<td>9 (5.1)</td>
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<td>Chiefs and elders</td>
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<td>0</td>
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<td>1 (3.6)</td>
<td>1 (0.6)</td>
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<td><strong>30 (100)</strong></td>
<td><strong>30 (100)</strong></td>
<td><strong>30 (100)</strong></td>
<td><strong>30 (100)</strong></td>
<td><strong>28 (100)</strong></td>
<td><strong>176 (100.0)</strong></td>
</tr>
</tbody>
</table>

regulations.

s. People must be punished when they go wrong.

**Assess the Resilience of society at the District Level**

On a scale of 1-5, 1 being lowest and 5 highest, how resilient do you think most districts (or country-specific administrative unit) are? Please explain the greatest obstacles to resilience. What do you recommend as strategies to address these obstacles? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

a. Preparedness, Lack of information, early warning system not available,

b. We must do more of public education.

c. The greatest problem is attitudinal and irresponsibility. Lack of logistics. No early warning system.

d. Stakeholders must be equipped to function.

e. Though decentralized, districts have no capacity to fight disaster.
Table 3: Preparedness and Resilience Ranks

<table>
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<tr>
<th>Assessment area</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
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<td>a. How resilient Ghana is as a society</td>
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<td>18</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>30 (100.0)</td>
</tr>
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<td>b. How resilient are most districts (or country-specific administrative unit)?</td>
<td>3</td>
<td>13</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>30 (100.0)</td>
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<tr>
<td>c. How resilient do you think most communities are?</td>
<td>4</td>
<td>10</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>30 (100.0)</td>
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<tr>
<td>5. Preparing for disasters</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>a. Ghana’s ability to prepare for disasters</td>
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<td>15</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>30 (100.0)</td>
</tr>
<tr>
<td>6. Mitigation of hazards and threats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>a. The country’s ability to mitigate against hazards and threats</td>
<td>1</td>
<td>17</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>30 (100.0)</td>
</tr>
<tr>
<td>7. Ability to respond to disasters</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a. The country’s ability to respond to disasters</td>
<td>2</td>
<td>14</td>
<td>13</td>
<td>1</td>
<td>0</td>
<td>30 (100.0)</td>
</tr>
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<td>8. Recovery</td>
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<tr>
<td>a. Ghana’s ability to recover to a level better than before disaster struck</td>
<td>5</td>
<td>18</td>
<td>7</td>
<td>0</td>
<td>0</td>
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<tr>
<td>13. How important leadership is in achieving disaster resilience in Ghana</td>
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<td></td>
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<tr>
<td>Policy/Operations</td>
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<td>16. How important this area is for achieving disaster resilience in Ghana</td>
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<td>1</td>
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<td>18</td>
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<td>8</td>
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<td>3</td>
<td>30 (100.0)</td>
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<td>Human Factors</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>17. How important this is for achieving disaster resilience in Ghana</td>
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<td>1</td>
<td>13</td>
<td>16</td>
<td>30 (100.0)</td>
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<td>a. Ghana’s leadership expertise in human factors?</td>
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<td>10</td>
<td>16</td>
<td>0</td>
<td>2</td>
<td>30 (100.0)</td>
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<td>Analytics</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>18. How important “Analytics” is for achieving disaster resilience in Ghana</td>
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<td>3</td>
<td>15</td>
<td>12</td>
<td>30 (100.0)</td>
</tr>
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<td>a. The country’s leadership expertise in disaster analytics</td>
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<td>14</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td>29 (100.0)</td>
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<td>Environmental aspects</td>
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<td></td>
<td></td>
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<tr>
<td>19. How important this is for achieving disaster resilience in Ghana</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>21</td>
<td>30 (100.0)</td>
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<tr>
<td>a. Ghana’s leadership expertise in environmental aspects</td>
<td>0</td>
<td>3</td>
<td>23</td>
<td>4</td>
<td>0</td>
<td>30 (100.0)</td>
</tr>
</tbody>
</table>

f. Well organised, District Assemblies and NGOs, build human capacity.

g. Lack of equipment at the local level;

h. Poor supply of logistics.

i. Sachet water producers must be made to clean the waste they create.

j. The magnitudes of the disaster situations are not that big but because we are not resilient as a country we are easily exposed at the district level.

k. The problem is how information is disseminated at the district level I think the

l. Proper coordination of industries;

m. Identify stakeholders/ have seminars.

n. At the strike of any disaster I don’t think we can mobilise to handle it.

Assess the Resilience of society at the Community Level

On a scale of 1-5, 1 being lowest and 5 highest, how resilient do you think most communities are? Please explain the greatest obstacles to resilience. What do you recommend as strategies to address these obstacles? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

a. Preparedness, Lack of information, early warning system not available,

b. NADMO not very much equipped,

c. NADMO must practice prevention measures.

d. There is communal coordination at the community level.

e. Volunteers at local level must be motivated.
Table 4. Wilcoxon rank-sum (Mann-Whitney) tests to find out whether respondents’ familiarity with the term “disaster resilience” (from question 2) determines the above rankings

<table>
<thead>
<tr>
<th>Assessment area</th>
<th>Rank sum (expected)</th>
<th>Familiar with the term disaster resilience?</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>4. Resilience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. How resilient Ghana is as a society</td>
<td>202.0 (201.5)</td>
<td>256.0 (263.5)</td>
<td>0.718</td>
</tr>
<tr>
<td>b. How resilient are most districts (or country-specific administrative unit)?</td>
<td>196.0 (201.5)</td>
<td>269.0 (263.5)</td>
<td>0.803</td>
</tr>
<tr>
<td>c. How resilient do you think most communities are?</td>
<td>184.0 (201.5)</td>
<td>281.0 (263.5)</td>
<td>0.435</td>
</tr>
<tr>
<td>5. Preparing for disasters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Ghana’s ability to prepare for disasters</td>
<td>175.5 (201.5)</td>
<td>289.5 (263.5)</td>
<td>0.227</td>
</tr>
<tr>
<td>6. Mitigation of hazards and threats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. The country’s ability to mitigate against hazards and threats</td>
<td>197.0 (201.5)</td>
<td>268.0 (263.5)</td>
<td>0.830</td>
</tr>
<tr>
<td>7. Ability to respond to disasters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The country's ability to respond to disasters</td>
<td>169.5 (201.5)</td>
<td>295.5 (263.5)</td>
<td>0.139</td>
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<tr>
<td>8. Recovery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana’s ability to recover to a level better than before disaster struck</td>
<td>155.0 (201.5)</td>
<td>310.0 (263.5)</td>
<td>0.026</td>
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<tr>
<td>13. How important leadership is in achieving disaster resilience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The role of leadership in disaster resilience in Ghana</td>
<td>202.0 (201.5)</td>
<td>263.0 (263.5)</td>
<td>0.980</td>
</tr>
<tr>
<td>16. How important this area is for achieving disaster resilience in Ghana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Ghana’s leadership expertise in disaster operations and policy</td>
<td>179.5 (201.5)</td>
<td>285.5 (263.5)</td>
<td>0.295</td>
</tr>
<tr>
<td>b. Ghana’s leadership expertise in human factors?</td>
<td>158.0 (201.5)</td>
<td>307.0 (263.5)</td>
<td>0.049</td>
</tr>
<tr>
<td>17. How important this is for achieving disaster resilience in Ghana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Ghana’s leadership expertise in human factors?</td>
<td>220.0 (201.5)</td>
<td>245.0 (263.5)</td>
<td>0.377</td>
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<tr>
<td>18. How important “Analytics” is for achieving disaster resilience in Ghana</td>
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<td></td>
<td></td>
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<tr>
<td>a. The country’s leadership expertise in disaster analytics</td>
<td>188.0 (201.5)</td>
<td>277.0 (263.5)</td>
<td>0.530</td>
</tr>
<tr>
<td>b. Ghana’s leadership expertise in environmental aspects</td>
<td>220.5 (195.0)</td>
<td>214.0 (240.0)</td>
<td>0.211</td>
</tr>
<tr>
<td>20. How important this is for achieving disaster resilience in Ghana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Ghana’s leadership expertise in environmental aspects</td>
<td>200.0 (201.5)</td>
<td>265.0 (263.5)</td>
<td>0.937</td>
</tr>
</tbody>
</table>

E.g. Respondents who were NOT familiar with the term “disaster resilience” ranked Ghana slightly higher than those who did in terms of its resilience as a society. This is seen by comparing the the rank sums to what was expected for each of the two groups. However, there were no significant differences \( (p = 0.718) \) between the two groups in terms of how they ranked Ghana as a society.

f. Inadequate resources and poor supply of logistics.
g. The magnitudes of the disaster situations are not that big but because we are not resilient as a country we are easily exposed.
h. Because at the local level there is communal spirit where they seem to help each other.
i. The greatest obstacle is logistics.

**Preparing for disasters**

How would you rate the country’s ability to prepare for disasters on a scale of 1-5? Please explain your ranking. What strategic capacity initiatives might be undertaken to improve the score (please indicate types of training/educational programs and organizations and individuals that should be involved)? The responses were as follows:
Please Tables 3 and 4 for the first and second responses. The explanations are found below.

a. Institutional structures must be in place. Response systems must be in place.
b. We should organize workshops and seminars and national sensitization programs; Desilting gutters of plastic wastes;
c. There are measures but not enough to get us prepared.
d. We are not putting enough into training staffs.
e. We are not prepared well enough for disasters.
f. Not enough education into disaster managements. Lack of supply of logistics.
g. The floods that struck us were not managed properly.
h. We have been able to manage the disasters with a few funds and logistics.
i. We don’t have good preparatory measures in place should disasters happen. Because stakeholders do not have enough logistics to supply to district or communities.
j. Each year the same things that we do to attract these disasters such as disposing plastics into gutters are repeated.
k. We are always completely unprepared as if we don’t know what to do. We always wait for the emergency situation to come before we start finding solutions.
l. Our ability to prepare for disaster is poor.
m. We must have a national contingencies plan;

Training to identify the various threats at every level;
o. Capacity building and coordination, simulation exercise, periodically meeting to review;
p. I don’t think we adequately prepared for disaster because the agencies required to forecast and foretell these disasters are not well resourced to function.

**Mitigation of hazards and threats such as those mentioned above**

How would you rate the country’s ability to mitigate against hazards and threats on a scale of 1-5? Please explain your ranking. What strategic capacity initiatives might be undertaken to improve the score (please indicate types of training/educational programs and organizations and individuals that should be involved)?

Please see Tables 3 and 4 for the first and second responses.

a. We are not conscious about disaster mitigation in this country.
b. NADMO involved in giving out relief items such as food, clothing, mattresses. Organization of stakeholders’ seminar.
c. No special rescue measures for children during disasters.
d. Lack of supply of logistics.
e. I think if you have preparatory plans you will go further to investigate against the very disasters. Due to inadequate resources to work in the case of NADMO, they don’t have the technical tools that will make them mitigate disasters.
f. There is no such mitigation in our institutions.
g. In the hospital for example, accident victims are brought half dead because of manhandling.
h. Due to inadequate logistics and human capacity we sit and watch some disasters eat us up.
i. I don’t think we have enough plans in place to mitigate any form of disasters.

**Ability to respond to disasters**

How would you rate the country’s ability to respond to disasters on a scale of 1-5? Please explain your ranking. What strategic capacity initiatives might be undertaken to improve the score (please indicate types of training/educational programs and organizations and individuals that should be involved)?

Please see Tables 3 and 4 for the first and second responses.

a. The biggest challenge is logistics, stakeholders must be well equipped with logistics and adequate funding.
b. Supply of ambulances has helped with the response to road accidents. Our response rate is getting better.
c. Lack of logistics.
d. Structures hinder efficiency.
e. The government must organize seminars periodically on disaster management.
f. NADMO and other stakeholders must be quick to respond to emergency problems.
g. If we were to have a national warning system I think our response to disaster will be better than it is now.
h. It takes a long time for a fire service van for instant to get to that disaster site.
i. For the response there has been some improvement at the health sector.
j. The introduction of more ambulances to the health has aided the prompt response to emergencies.
k. We are doing our best.
l. Provision of adequate logistics such as fire fighting equipments.

**Recovery**

On a scale of 1-5, how would you rate the country’s ability to recover to a level that is better than before the disaster struck? Please explain your ranking. What strategic capacity initiatives might be undertaken to improve the score (please indicate types of training/educational programs and organizations and individuals that should be involved)? Please see Tables 3 and 4 for the first and
second responses. The explanations are found below.
a. Due to lack of logistics our recovery rate is not the best.
b. We must empower the institutions to work.
c. Flooding easily exposes our unpreparedness.
d. It takes a long time to recover from disaster based on previous experience.
e. There must be some simulation exercises on disaster management.
f. We need to inject more funding into disaster management for a better recovery. Victims of disaster are left to their fate.
g. For recovery, the least said the better.
h. Our recovery rate is poor, maybe due to certain constraints on the part of the stakeholders.
i. Aiding the people to settling is a problem. Aid given to them is not adequate to help them resettle better.
j. Individual resilience is there because after disasters people find a way of resettling whether they are helped by the agencies or not.
k. Our response rate will determine our recovery rate.

The role of leadership in achieving disaster resilience in Ghana

In your opinion, what are the key qualities that a good leader should have? Can you rank the top five (5) qualities? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

1st most important quality


2nd most important


3rd most important


4th most important


5th most important

Proactive. Show respect to followers. Ability to motivate. Visionary. Be able to put in place volunteers in the local community. Must be firm. Must live in the community. Must show leadership by example. Must be a good listener. Must be a good team leader. A knowledge person. Pro-democratic.

Leadership skills contributing to resilience building in a system

In your opinion, what are the five (5) key leadership skills/competencies that contribute to resilience in Ghana?

a. Communication skills.
b. Ability to command respect.
c. Organizational skills.
d. Good team leadership.
e. Ability to inspire.
g. Good command over the English language.
h. Ability to mentor.
i. Professionalism.
j. Strategic planning.
k. Being well informed, a team builder and proactive.
l. Understanding the subject of disaster management.
m. Have the right attitude.
n. Must be physically fit.
o. Knowledgeable. Passion. Managerial skills. Must have the passion for the job.
p. Respect subordinates. Must love the job to work for extra hours.
q. Ability to plan ahead. Be good at assessing or articulating situations.
r. Must be good at data gathering and analysis.

Where are the most important leadership gaps?

Where do you believe the most important leadership gaps are in terms of resilience on a national scale? Locally? In your opinion, what capacity development initiatives might address these needs? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

a. Capacity building. There should be seminars to encourage capacity building
b. Policy implementation. Human capacity development. Lack of logistic supply
c. It has to do with the attitude of the people
d. Lack of provision of logistics to stakeholders
e. Lack of awareness and no prioritisation of disaster management
f. Lack of equipment to respond to disasters
g. Taking the right decisions at the right time.

Politization of everything in the country
h. Lack of inspirational leadership
i. Planning, we need to pay a close look at planning.
j. Implementation of policy documents, laws and policies
k. Information dissemination. How well we are able to inform the people of any upcoming disaster
l. Lack of resources and lack of funding
m. Leaders are not clear about what they want to do about disaster management.
n. There is not enough technically experienced personnel due to lack of training.
o. Everything is done out of political will/emotional (NADMO must be depoliticized)
p. In the area of application of policies and laws the law enforcing agencies must meet with stakeholders of disaster management and find solutions to this

How are these positive results supported, encouraged and judged in Ghana

a. Not really because everything is politicised
b. These qualities are not encouraged in the society
c. Yes by giving the youth a chance in governance
d. Through community engagements
e. Encouraging the youth to get involved in national development

Policy/Operations - focuses on best practices and organizations in disaster management

On a scale from 1-5, how would you rate Ghana’s leadership expertise in disaster operations and policy? Why? What things can be done to improve your score? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

a. The existing laws and policies must be made to function
b. Organize seminars on disaster management
c. Sachet water production must be banned
d. Policy implementation is a challenge
e. Leaders must seek higher education through short courses, seminars and workshops
f. Important to build resilient society
g. We only respond when there are emergencies
h. We need to depoliticize leadership role to get the technical people into position
i. We need some laws to guide us
j. Organizing seminars to upgrade leadership expertise
k. We must try to implement more of the policies concerning disaster management
l. The policies are well defined but not well implemented
m. The leaders lack the will power to implement the policies

Human Factors - the study of social and individual factors that determine how populations respond to disaster threats. On a scale from 1-5, how important do you think capacity in “Human Factors” is for achieving disaster resilience in Ghana? On a scale of 1-5, how would you rate your country’s leadership expertise in human factors? Why? What can be done to improve your score? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

The solution is simply change in attitude. Sensitization of the people; The people must be educated on disaster management. People must develop interest in national issues. We need to do more of education starting from our schools. Plastic waste must be properly managed. The assembly must be well resourced to carry out its duties. Our teachers should educate the people to keep their environment clean. Managerial positions are based on your political affiliation. We should try and depoliticize at least disaster management related designations. By constant training to get enlightened to understand what to do as leaders; Be responsible by taking initiatives. Benchmarking, set targets and follow up to get it done. Be held accountable at all level.

Analytics - focuses on information management and tools such as early warning, risk assessment and the use of geographic information systems tools and new tools such as visualizing new data sources. On a scale from 1-5, how important do you think “Analytics” is for achieving disaster resilience in Ghana? On a scale of 1-
5, how would you rate your country’s leadership expertise in disaster analytics? What can be done to improve your score?

Not much equipped in this area. Equip stakeholders to function. There is no early warning system. If we should have proper early warning systems, we would have prepared long enough before certain disasters strike. Don’t have so many disaster management experts. If we should have a national early warning system to alert in time of natural disaster, that will control the casualty levels should disaster strike. We have volunteers all over in the communities to alert us once there are signs of disaster. We need to have localized early warning systems.

Can you identify three key initiatives that are addressing capacity development needs in this area?

Seminars; Public sensitization; Logistics supply; Collaboration among stakeholders, Institutional workshops and seminars Equip the meteorological services. Constant training of staffs

What suggestions do you have to strengthen disaster resilience leadership in your country? Are there particular institutions or individuals that are particularly important as opinion leaders in this area? Are there any existing institutions or organizations that already are undertaking leadership development programs? Which are these? Who are the contacts? Please see Tables 3 and 4 for the first and second responses. The explanations are found below.

Traditional practices such as bush burning during dry seasons must be discouraged. We must empower the stakeholders to function. Encourage people to keep their environment clean. Attitudinal change towards the environment, Stakeholders must have well defined roles to avoid overlapping responsibilities. Institutional capacity building should be encouraged. Improve the knowledge base of the society. Food security assessments; Geographical Information Systems, NADMO needs to plan well on how to prepare and respond to disasters. Strengthen collaboration between various agencies to address disaster issues. We must be committed to implementing the policies that the stakeholders come out with. Educating the children at the early stage on disaster management, Political parties must include disaster management in their manifesto. We must design curriculum to teach disaster management in our schools. Strengthen the disaster management institutions. The low rank people should be involved in discussion making. Leadership must focus on coordination. Empower district assemblies.

Discussion and Conclusion

The Hyogo Framework for Action of (2005-2015) had the following goals. It was to

(1) Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation;
(2) Identify, assess and monitor disaster risks and enhance early warning;
(3) Use knowledge, innovation and education to build a culture of safety and resilience at all levels;
(4) Reduce the underlying risk factors; and
(5) Strengthen disaster preparedness for effective response at all levels.

What was left in the hands of local and national leadership was, may be, the field standard operating procedures for the implementation of the Hyogo Framework (World Conference on Disaster Reduction 2005:1-22). All the five thematic areas fall within the job description of a leader for crisis management, with the call for research and education as a set of overarching expectation. The thematic indicators also point to the strengthening of leadership and capacity building of the practitioners and stakeholders in the operationalization of disaster risk reduction measures, mitigation and emergency intervention activities (Hunt et al., 1999; Pillai and Meindl 1998; Trice and Beyer 1986; Weber, 1947). Left hanging in the balance was the question: who was to help build the capacities of the implementing leadership? As stated in the Post-2015 Framework for DRR, the type of leadership that is being demanded for DRR and its inter-related stakeholders and disciplines is not vested in one single individual or entity (Marcus et al., 2006). It calls for a group of leaders that possess a high degree of the collective knowledge, skills and abilities for crisis or disaster management with commonality of purpose to the real or perceived threat; that is to say, a ‘mega-leader’ (Marcus et al. 2006). That leader, should before coming to the job already; perhaps; be knowledgeable in disaster management, crisis management, climate variability, urbanization, building engineering, town and country planning, risk reduction, disaster analytics, human resource management, logistics, law, policy, and the list goes on. In fact, disaster risk reduction depends on governance mechanisms across sectors and at local, national, regional and global levels and their coordination, which demands so much out of a single person.

To be able to achieve any meaningful results, “it requires the full engagement of all State institutions of an executive and legislative nature at national and local levels, and a clear articulation of responsibilities across public and private stakeholders, including business, to ensure mutual outreach, partnership and accountability” (Marcus et al., 2006).

A recent audit by the African Union, together with the International Strategies for Disaster Risk Reduction, of the progress made by the nations in Sub-Saharan Africa on Disaster Risk Reduction, revealed that there were too many
gaps yet to be filled (Vordzorgbe et al. 2008). A similar review conducted by the Director-General of the European Commission Humanitarian Organization, (DG ECHO), also concluded that there were 'gaps and challenges' in the implementation of Disaster Risk Reduction programs in many places (Wilderspin et al., 2008). Each of these three institutions also reported that there have been some gains despite the apparent challenges for the integration of the Disaster Risk Reduction concept into the national developmental agenda and consciousness (Action Aid and UNISDR 2008). Some of the gains have been the reduction in actual numbers of fatalities in large disaster events such as cyclones, earthquakes and in the case of Africa, flooding and road traffic fatalities. Additionally, countries have enhanced their capacities. There has been a systematic enlargement of the appraisal, understanding and expectations of leadership about disaster risk, preparedness, mitigation. There have been improvements in volunteerism in emergencies at the district, regional and national levels. These have culminated in the creation of national and international platforms across systems (UNISDR, 2008). One of such international platforms is the UN-Spider network, which is run by Office of Outer Space Affairs, UNOOSA. It provides the state of the art information, real time satellite observation and report of weather and other natural atmospheric developments to its members and audience the world over, but particularly to developing countries (www.un-spider.org). Due to its, perhaps, high science content, the services provided by the UN-Spider cannot be said to be mainstreamed, reaching the most vulnerable or even the local leaders who are closest to the most vulnerable in the provision of services and social protections during national or local disaster and emergency situations. Despite the gains, all three institutions, namely, UNISDR, DG-ECHO, and the African Union, reported that there were systemic challenges in actualizing the DRR concept into development goals (Vordzorgbe et al. 2008; Action Aid and UNISDR 2008). Although since then, there have been efforts by private and other educational institutions to train the practitioners for DRR, in the total scheme of leadership capacity the general consensus is that the situation has not significantly improved (Understanding Risk, GFDRR, 2014). The list of gaps identified by the audit is provided here in no particular order of importance or ranking:

(i) ‘Governance, organizational, legal and policy frameworks’,
(ii) ‘Risk identification, assessment, monitoring and early warning’,
(iii) ‘Knowledge management and education’,
(iv) ‘Reducing underlying risk factors’,
(v) ‘Preparedness for effective response and recovery’.

Leadership capacity appear to lie at the base of the predicament bedeviling the prompt integration of Disaster Risk Reduction modalities into national platforms, as well as in building the resilience of the communities against shocks and stresses from events such as flooding, poor distribution of available food supply, and minimizing the disease burden.

Building the Resilience of a System or part of a System

Resilience is the measure of a system’s or part of the system’s capacity to absorb and recover from hazardous event, (See Figure 1 ) (Adger 2000). ‘Vulnerability to environmental event such as climate change, disasters and emergencies, is the degree to which systems are susceptible to and unable to cope with adverse impacts’ (IPCC 2001; Adger et al., 2005). In the case of the emerging economies such as Ghana, vulnerability to climate change is a major national concern, particularly because of its net effect on natural emergencies such as flooding and the displacement of human settlements. Leadership for disaster emergency administration in an ecosystem like Ghana needs to appreciate that vulnerability is not a neatly packaged phenomenon but one that differs according to social groups and sectors (Yaro, 2010). Kates (2000) described this as differential vulnerabilities and impacts. This is also due to the fact that resources and wealth are unevenly distributed (Adger and Kelly, 1999). It is recognized that, even within regions, impacts, adaptive capacity and vulnerability will vary. Therefore, discussions of vulnerability often highlight the importance of poverty and inequality or differential resource access (Adger and Kelly, 1999). These are all issues of concern for leadership in building the resilience of the community against systematic shocks and stresses, whether the leader is charismatic, transformational or exhibits the attributes of a mega-leader.

It also appears from the data and the literature review that, disaster risk reduction modalities have not become pedestrian to a critical mass of practitioners, researchers and the bureaucracy in Ghana and elsewhere in the sub-region. This outcome would make it, perhaps, impossible to advocate for meta-leadership or any other type of collaborative leadership form in resilience building and in disaster risk intervention in Ghana and elsewhere. The fear is that organizations and entities would continue to work in silos and there would be little or no cross-fertilization of ideas, lessons learned and experience. There is also confusion in the minds of the practitioners about what DRR is or is not. The apparent confusion in the minds of institutional actors in Ghana and in the rest of SSA is that the basic tools for mainstreaming conventional development projects are not intrinsically different from those needed for the implementation of DRR and its mainstreaming. It seems to many that, DRR is, perhaps, a redundant and unproven theory of development in comparison to conventional approaches of development and question why DRR should take precedence over the
Figure 1: Means of the Ranks

Legacies of economic and social development with which they are familiar and comfortable. In order to mainstream DRR concept, leadership at the district, regional and national levels, the leadership in academia and research need to embrace the concept in a massive and dedicated way.

**Recommendations**

*To ministers of education, accreditation boards and heads of tertiary institutions and Disaster Management Institutions:* Preparing legislation for the introduction of Disaster and Emergency Management studies into national educational programs is already belated and the time is now to approach this task. A new crop of leaders need to be developed for disaster risk reduction and in resilience building of the communities. Education is a proven approach to developing new leaders and enhancing the capacities of the existing ones.

*To ISDR:* The attempt to differentiate and segregate DRR from conventional development tools makes DRR confusing and unattractive to many SSA nations, hence the lukewarm reception and the slow pace at integration. Linking DRR to MDGs as articulated by researchers is certainly an encouraging development in assimilating DRR into existing development concepts.

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