

Assessing Effectiveness of Disaster Management Institutions in Pakistan: A Case of Balochistan

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Abstract

Disaster management (DM) is a set of well orchestrated actions which works simultaneously at different tiers to ensure minimization of adverse affects of any calamity. In DM, like many other developing countries, Pakistan also faces the challenge of overlapping bureaucratic domains plagued with political interference and corruption. This study aims to assess effectiveness of DM institutions of Pakistan with special emphasis on Balochistan while focusing upon Institutional Vulnerabilities (IV) and overall plan quality by using mixed methods, analysis of collected data through Statistical Package for Social Sciences (SPSS) and relying upon expert estimation. It is found that although laws enacted are present on papers but their manifestation on ground due to institutional vulnerabilities and poor plan quality is far below than the required standards. This vacuum is evident from the existing level of coordination between various stakeholders and overlapping domains resulting into marred responsibilities which is further augmented by lack of capacity building and development of community resilience. Study highlights aspects which needs definite improvement if Pakistan wants to follow the guidelines outlined under Sendai framework.

Keywords - Disaster Management, effectiveness, institutional vulnerability, plan quality, Sendai framework.

1. Introduction and Background

Disaster is "a serious disruption in routine functioning of a society beyond manageable capability of affected community; involving

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widespread human, material, environmental and/or economic loss” (Baas, Ramasamy, Pryck, & Battista, 2008; Coppola, 2015a; UNISDR, 2009b). It is an established fact that frequency of hazards taking place with rising vulnerability levels (Khan & Ashori, 2015) and overall number of affected people has increased wherein poorer especially in developing countries have been disproportionately affected (UNISDR, 2009a); although deaths caused have reduced but these calamities have become more costly (Coppola, 2015b). This increase in frequency and devastation of disasters has brought disaster risk management (DRM) “which includes but goes beyond disaster risk reduction (DRR)”, into focus of planners to prepare, mitigate and reduce the negative effects of a disaster if it occurs. However, DRM besides any other management function once dilated upon at higher forum, has an inbuilt linkage with governance, which according to The World Bank is “a method in which authority is exercised in the organization and running of a country's economic and public assets for development” (World Bank, 1994). In other words, governance comprises of customs and traditions by which power in a country is used and exercised. According to Lewis T. Preston former President of The World Bank, “accountable and efficient management by the public sector and an unsurprising and transparent policy structure are critical to the efficiency of markets and governments, and hence to economic development” thus governance; its importance and policy formulation in this context cannot be overlooked. However, importance of governance, especially in developing countries is even more pronounced because colonial bureaucratic practices plagued with the menace of corruption and mismanagement (Mangi, Kanasro, & Memon, 2014) are still practiced where institutions are hierarchically overlapped and are not well orchestrated to meet the challenge (Hermansson, 2017). In developed countries, economic loss caused by the disasters is far more than the developing countries but in terms of human life losses it is vice versa (Amir Nawaz Khan, 2015) and Pakistan is no exception to it.

DM in Pakistan has historically been reactionary in nature, primarily established on “Emergency Response Paradigm”(ADB & World Bank, 2010) with overlapping responsibilities of stakeholders. Pre-2005 DM system of Pakistan could be termed as loosely organized and comparatively inefficient command & control system with more flood-centric approach involving 27 departments (Cheema, Mehmood, & Imran, 2016); however after enactment of National Disaster Management Act (NDMA) 2010, DM system of Pakistan is established on three tiers i.e. federal/ national, state/ provincial and local/ district (Ahmed, 2013; Botteril, 2004) as similar to Japan (Ogata, 2016). National Disaster Management Commission (NDMC) the highest disaster related policy and decision making body; which works directly under the Prime Minister of Pakistan, was established just after the devastating Kashmir

Earthquake of 2005. However DM being a multi sectoral wide ranging activity which needs close and timely cooperation of multiple ministries/ departments, necessitated the establishment of a coordinating body which could not only act as headquarters but also facilitate and oversee actions from different stakeholders thus National Disaster Management Authority (NDMA) was established. Similarly at provincial level, Provincial Disaster Management Authority (PDMA) is established which works under provincial DM commission / Chief Minister. It lays down DRM policies (in accordance with the policy guidelines given by NDMA) and also prepares DRM plans besides provision of financial and technical assistance. The lowest tier is of District Disaster Management Authority (DDMA) which works under District Nazim (District Chief) who practically implement the plans through frontline force of Town and Tehsil teams (Ainuddin, Aldrich, Routray, Ainuddin, & Achkazai, 2013). Present DM hierarchy and various stakeholders involved (under NDMA 2010) are shown in table 1.

Table (1) Stakeholders involved in DM - Pakistan

<u>Level</u>	<u>Institution</u>	<u>Stakeholders</u>
National	NDMC / NDMA	<ul style="list-style-type: none"> • Emergency Relief Cell • National Crisis Management Cell • Federal Flood Commission • Federal Relief Commission • Ministry of Foreign Affairs (MOFA) • Ministry of Defence (MoD) • Ministry of Education • Ministry of Information & IT • National Logistic Cell (NLC) • Fire Services • UN Agencies / INGOs / NGOs • Media
Provincial	PDMC / PDMA	<ul style="list-style-type: none"> • Provincial Relief Department / PDMA / Cell • Emergency Operation Centre • Rural Support Programmes • Provincial Crisis Management Cell • Fire Services • UN Agencies / INGOs / NGOs • Media

		<ul style="list-style-type: none"> • Respective Corps Headquarters / Armed Forces
District	DDMA	<ul style="list-style-type: none"> • Military / Armed Forces Component • Medical Services • Fire Services • District Relief Cell • Community Based Organizations • Rural Support Programmes

Source: (Ainuddin et al., 2013)

Pakistan is a disaster prone country conferred with extremes of topography and environment (Maqbool & Hussain, 2014) with its vulnerability to hazards and calamity varying from moderate to severe (Ainuddin et al., 2013). Despite the fact that Pakistan has witnessed increased recurrence of disasters (especially weather and climate related) in recent past (Larsen, Oliver, & Lanuza, 2014) and is ranked number 7th in Climatic Risk Index 2017 by virtue of location, it is also included in list of worst affected countries in long – term climate risk index as well (Sönke, Eckstein, & Inga, 2016). Though deaths toll due to disasters has reduced globally but these calamities have become more costly (Coppola, 2015b) but in case of Pakistan; lack of capability and/or reluctance of the government to DRR measures towards natural calamities has amplified human sufferings and misery in the country (Ahmed, 2013), moreover, unless disaster is severe enough with happening in close proximity to get the attention for drawing lessons by the concerned quarters, we tend to forget (Ramroth, 2007). Apropos, investing in DRR to prevent potential losses is an expensive but cost effective investment (UNISDR, 2015). To have maximum dividends out of this costly investment, good governance and management of resources is a must.

The gap between policy and what actions ought to be in any public domain falls under the preview of governance; for any meaningful intervention to bring about change cannot be planned without an appraisal of the prevailing situation and vulnerabilities to which existing systems are confronted with. In this regard, few disaster related studies have been conducted in Pakistan including study by Ahmed on legal structure of the NDMA 2010 (highlighting functional overlap between different organizational structural organs at various levels of the hierarchy leading to confusion in resource allocation and implementation of policy), Maqbol and Hussain pointing out reactionary rather than a preparedness mode of disaster management institutions in Pakistan; their view are shared by Adnan (2014), who adds that some legal structures exist on papers but ground implementation is seriously wanting whereas

Ahmed (2013) points towards the gap between the desired and existing level of preparedness to tackle disasters in Pakistan. Balochistan specific works includes work in the fields of drought (Ashraf, Routray, & Saeed, 2014; BUITEMS & UNDP, 2015), legal framework (Ahmed, 2013) and community resilience (Ainuddin et al., 2013; Ainuddin & Kumar, 2012; Ainuddin & Routray, 2012).

3. Conceptual Framework - Institutional Vulnerability and Plan Quality

World over planners are shifting from DM to DRM (Wahlstro, 2015); Pakistan also took almost five years from realization to have an effective DM system after Earthquake of 2005 till its manifestation in shape of enactment of PDMA in 2010 (Ahmed, 2013). Although the legislation on the subject has been carried out (NDMA 2010) but effectiveness of DM (planning quality and governance related to implementation) comes into question with every fresh instance of natural calamity in the country which may even be at a relatively small scale owing to low resilience (Ainuddin et al., 2013) such as rain and snowfall that occurred in Balochistan in January 2017 (Basit, 2017). In literature more focus has been found on stability and resistance of the institution whereas IV has received less attention of researchers (Dolfsma, Finch, & McMaster, 2014). No comprehensive study on effectiveness of DM institutions and quality of DM plans, while evaluating gap between the mandated requirements of the act of the parliament and the current state of affairs especially for Balochistan could be found to the best of search efforts by this scribe, necessitating requirement of an in-depth study to assess the DM planning quality and its implementation while highlighting voids which still exists with a view to recommend viable measures for improvement thus reducing the effects of any disaster in future.

This study aims to assess effectiveness of DM institutions of Pakistan; Balochistan as a case study with specific objectives of assessing IV of DM organisations of Pakistan besides assessing planning quality with a view to identify improvements warranted in DM in Balochistan. During the course of research, lack of availability of developed infrastructure coupled with vastness of the area and lack of availability of qualified human resource engaged in dealing with DM at operational and planning level posed research limitations necessitating reliance on expert estimation.

4. Research Methodology

During the course of research, two domains (institutional vulnerability and plan quality) were dilated upon. Total IV was calculated through finding

specific institutional DRR index basing upon Sendai framework targets whereas *macro institutional quality index* was drawn through world governance indicators. As regards *plan quality*, it was assessed on the basis of framework developed by Berke and colleagues (Philip Berke et al., 2012). Adopted framework involves evaluating plan quality from goals, fact base, mitigation policies, implementation & monitoring, inter-organizational coordination and public participation aspects.

Mixed methods were used primarily due to the limitation of availability of documentation, lack of qualified human resource both at operational and policy making level, lack of infrastructure and vastness of the area thus desk research, data collection through questionnaire and expert estimations were relied upon. *Primary data* was collected through interviews, emails and a survey questionnaires from 31 experts associated with disaster management departments / institutions (NDMA, PDMAs, Civil Defence etc), relief organizations (Red Crescent, NGO / INGOs etc), bureaucrats (who have been associated with disaster management), Academia (PhDs/ M Phil in the field of disaster management & Developmental Studies besides HoD of different institutions), whereas *Secondary data* was obtained from various policy papers, research work, reports, books and articles published in reputed journals. Due to availability of limited number of qualified persons, an expert estimation method through *Snowball sampling* technique was applied. Sample size was 31 experts in the field of development planning and disaster management and sample was collected primarily through a questionnaire communicated via email.

5. Institutional Vulnerability

Institutions are socially entrenched set of laws (Hodgson, 2006) which make most of the social construct, these institutions may be strong in terms of their durability or may be weak due to its vulnerability to different factors (Dolfsma et al., 2014) such as any force, influence or pressure (internal or external) due to which identity of an institution is deteriorated or lost over time. So it is pertinent to understand that what could be the vulnerabilities of institutions to which it is subjected to? The term IV was used in early 1950s by Philip Selznick describing it as “the condition where institutions such as culture and traditional institutions are prone to social change” (Selznick, 1951) whereas, other scholars have defined IV as “the inefficiency of the different authorities responsible for hazard management whose results imply an exposure increase on societies, i.e. amplifies hazard” (López-Martínez, Gil-Guirado, & Pérez-Morales, 2017). Despite the work of Selznick in early 50s, how to assess IV was a question remained unanswered until responded by Jonatan A Lassa in 2010 that pioneered *Institutional Vulnerability*

Assessment (IVA). Lassa calculated “total institutional vulnerability” with the help of two factors i.e. “specific institutional DRR index” according to HFA (which has been modified for this research in line with Sendai Framework) and “institutional quality index at macro level” derived from world governance indicators (same has been adopted for this study as well).

5.1 Specific DRR Institutional Index

Sendai progress indicators are the variables to be analyzed, using statistical software SPSS 20. The main statistical techniques used are descriptive statistical analysis and principle indexing method analysis. In total, there are 6 components with 22 indicators as variables.

Table (2) Specific DRR Institutional Vulnerability

Components	Indexes	Mean	Range	Number of Item
Disaster mortality	Evacuation plans cater for safety.	1.06	0-2.0	1
	Medical response plans for each district.	1.15	0-2.0	1
	Public capacity building.	1.58	0-1.0	1
	Town planners adopted DRR rules.	1.45	0-2.0	1
	Land use laws	1.25	0-2.0	1
	Overall mean	1.29	0-2.0	5
	Reduction number of affected people	Rescue operation available.	0.88	0-1.0
Structural control measures exist.		1.06	0-1.0	1
Search and rescue capability is available in each district.		1.19	0-2.0	1
Epidemic control plan prepared.		0.78	0-2.0	1
Overall mean		0.97	0-2.0	4
Reduction to critical infrastructure		Number of power supply damaged.	0.77	0-1.0
	Number of water supply damaged.	0.66	0-1.0	1
	Health facilities damaged.	0.34	0.1.0	1
	Overall mean	0.64	0.1.0	1
		0.60		4

Education facilities damaged				
Overall mean				
Progress in DRR strategies	DRR policy working.	1.10	0-2.0	1
	Sectors integrated in DRR strategy.	1.23	0-2.0	1
	Community resilience covered by DRR policies.	1.27	0.1.0	1
	Overall mean	1.20	0.1.0	3
International cooperation	INGO working for DRR.	1.35	0-1.0	1
	INGOS provided capacity building for DRR.	1.74	0-1.0	1
	Overall mean	1.54	0-1.0	2
Early warning system	Local government have plan for early warning system.	1.58	0-2.0	1
	System available for multi hazard monitoring.	1.12	0-2.0	1
	Mock drill exercises conducted.	1.48	0-1.0	1
	Database accessible for public.	1.53	0-1.0	1
	Overall mean	1.42	0-1.0	4
	Overall mean			

In the current study IV assessment is linked with Sendai framework goals and results were analyzed on the basis of these components in the context of Pakistan. In the field of disaster mortality management, slightly over than the half of the maximum, medical response and evacuation plans are prepared and land use laws are enacted, whereas adherence to DRR rules by town planners and public capacity building considerably needs serious attention. In case of any calamity, search and rescue capability at Provincial level exists to an extent but at district level, it is wanting, same is the case with structural control measures which are deficient in most of the cases. State of epidemic control measures is comparatively better than other factors. Although

prevention and safety of public from disaster and reduction of its adverse affects is a state responsibility which is ensured through provision of public good, however due to the political interference, mall intentions and unjust distribution of resources, at times access to these public services are restricted to some specific affiliated groups similarly developmental funds are directed accordingly towards a specific group amongst the community thus health care facilities, roads and communication infrastructure is developed unevenly (Ahlbom & Povitkina, 2017). Educational, health and power supply sources are more vulnerable as compare to health facilities in case of any disaster. According to Sendai Framework, substantial progress in adoption of DRR strategies was set as one of the goal, however in case of development of community resilience, integration of different sectors of society and working of DRR policies; no worthwhile progress is seen. Role of INGOs / NGOs in capacity building was negligible in capacity building for DRR; their involvement and support is more of response oriented activities than capacity building for DRR. Systems are available and working for multi hazard monitoring; however availability of plans for early warning with local governments, frequency of mock exercises / rehearsals and accessibility of database to the people is poor as it is well above then maximum.

5.2 *Macro Institutional Quality Index*

World governance indicators with 6 components and 22 indicators as variables were assessed to find out macro institutional quality index, each component have been examined in detailed and outcome is shown in table 3 given below.

Table (3) Governance Indicators

Components	Indexes	Mean	Range	Number of Item
Rule of law	Rule of law.	0.35	0-1.0	1
	Law implementation.	1.34	0-1.0	1
	Effectiveness of court	0.47	0-2.0	1
	and police.	0.85	0-2.0	1
	Crime rate.	0.99	0-2.0	1
	Eruption of violence after event.	0.80	0-2.0	5
Overall mean.				

Voice & accountability	People participation in government selection.	0.78	0-2.0	1
	People enjoy freedom.	1.12	0-2.0	1
	Freedom exists in society.	0.20	0-1.0	1
	The role of media in disaster.	0.13	0-2.0	1
		0.55	0-2.0	4
Overall mean				
Regulatory quality	Policies to deal with the issues.	0.16	0-2.0	1
		0.25	0-1.0	1
	Policies implementation.	0.58	0-1.0	1
	Policies are friendly for private sector	0.33	0-2.0	3
Overall mean				
Government effectiveness.	Services providing by government. Public and government coordination.	0.68	0-1.0	1
		0.66	0-1.0	1
	Formulation and implementation maintenance of policies.	0.54	0-2.0	1
		0.60	0-1.0	1
	Government role in Implementation of policies.	0.62	0-2.0	4
Overall mean				
Political stability.	Government destabilization.	0.77	0-1.0	1
		0.66	0-1.0	1
	Destabilization by violent means.	0.34	0.1.0	1
		0.59	0.1.0	3
	Destabilization by terrorist means.			
Overall mean				
Control of corruption.	Level of corruption.	0.10		1
	Corruption used for major gains.	0.23		1
		0.27		1
	Corrupt people help to each other for corruption.	0.20		3
Overall mean				

While assessing governance indicators, data was collated and analyzed under internationally recognized sub factors issued as “world governance

indicators”. Effectiveness of courts and police is observed as quite low as half of maximum, resultantly rule of law was found weak thus crime rate is increased. Role played by media (positive) during disaster coupled with existence of freedom in society are low, peoples participation in government is again not encouraging. Despite friendly policies for private sector, policies to deal with disaster related issues and policy implementation are near to the ground. Government effectiveness in terms of provision of services, coordination between public & government and implementation of policies was higher than the half of maximum. Chances of government destabilization are more due to political instability as compared to its overthrow because of terrorist and violent means. Major contributing factor towards good governance is control of corruption, during the course of research, level to control corruption was the lowest. Corruption is being used for major gains and securing each other back by the corrupt people.

6. *Plan Quality Assessment*

6.1 *Evolution of Plan Quality Assessment*

Plan evaluation has gained more attention of research scholars during last few decades however it is comparatively an unexplored field (Guyadeen & Seasons, 2015). Plan quality evaluation; is a field of study to establish whether accepted criteria lay down by the researchers and experts are adhered or absent from the plan being evaluated (Philip Berke & Godschalk, 2009). It is carried out on the core principles of plan quality evaluation over which scholars have developed conceptual consensus and these include “goals, fact bases, policies, implementation and monitoring, inter organizational coordination and public participation in plan creation” (Lyles & Stevens, 2014). Plan quality evaluation is pertinent due to the reason that effects of plans will be visible in future once environment and circumstances would have changed (which are unpredictable or uncertain) whereas availability of plans in present can be ensured and after their evaluation, necessary corrections and modifications may be applied as a mid course correction without losing a valuable opportunity to study for their improvement. Another main reason of gaining more and more attention by the scholars by plan evaluation is that; with the help of evaluation, decision makers can monitor efficacy and effectiveness of their plans and policies with accurate knowledge about pace of achieving intended objectives. Conceptual foundation of plan quality evaluation was laid by William Baer through synthesis of available literature on the subject during late 90s. A vocabulary was proposed by him for plan evaluation after reviewing different methods including vision statement, land use guides, processes,

blueprint, responses to different regulations etc through which local master plans were viewed (Norton, 2008).

6.2 Overall Plan Quality

During last three decades, rapid growth with high pace of development and urban expansion has not only provided various opportunities to different social groups but also resulted in numerous problems too. This race towards development needs to be channelized and regulated for which deliberate planning is a must, however plans offer limited direction to guide short-term decisions to achieve long-term mitigation. It is important to note that with urban planning becoming more market oriented; capability of planning to reduce vulnerability of cities has also reduced gradually (Eraydin & Tasan-Kok, 2013). Now the question is why to assess overall plan quality? The answer is explained in the words of Berke and Godschalk that “only systematic evaluation of plans enables us to identify their specific strengths and weaknesses, to judge whether their over- all quality is good, and to provide a basis for ensuring that they reach a desirable standard” (P Berke & Godschalk, 2009). Scholars have broadly identified six principle area of plan quality evaluation with four external (goals, fact base, mitigation policies and implementation & monitoring) and two internal (inter organizational coordination and participation) principles.

For each of the four internal plan quality principles the overall mean score ranged from only 0.84 for goals to 0.61 for policies out of a maximum score of 2 (Table 4), indicating that none of the internal principles received more than half the maximum. Plans will also likely have limited influence on hazard mitigation outcomes. For the two external plan quality principles the overall mean score was only 0.71 for inter-organizational coordination and 0.83 for participation out of a maximum score of 2 (Table 5), which indicates that none of the external principles received more than half the maximum. The findings showed that, overall states do not have well-organized, technically sound, and thoroughly prepared plans that reflect a strong commitment to mitigation.

Table (4) Internal Plan Quality Principles and indexes

Principles	Indexes	Mean	Range	Number of Item
Goals	Hazard loss.	1.12	0-2.0	5
	State and local	0.67	0-2.0	2
	coordination.	0.34	0-2.0	2
	Overarching vision.	0.84	0.3-1.40	9
Overall mean.				

Fact base	Quality of hazard assessment.	1.15	0.60-2.0	5
		0.64	0-2.0	8
	Hazards addressed and their prioritization.	1.04	0-2.0	9
	Vulnerability assessment.	0.93	0.20-	2
		0.62	1.70	36
	Risk assessment.	0.74	0.56-	60
	Capability Assessment.		1.80	
	Overall mean		0-2.0	
Mitigation policies	Promotion of awareness/knowledge.	0.97	0.10-2.0	8
	Development regulations.	0.58	0.23-2.0	5
		0.32	0.20-	2
	Development incentives.	0.14	1.60	1
	Acquisition.	0.64	0.23-	3
	Structural controls.	0.34	1.70	4
	Protection of infrastructure.	0.56	0.14-	5
		0.55	1.30	5
	Recovery measures.	0.61	0.40-	33
	Financial Assistance.		0.98	
	Overall mean		0-2.00	
		0.60-		
		1.98		
		0.10-		
		0.20		
Implementation and monitoring	Evaluation and update.	0.78	0.28-	6
	Monitoring and implementation.	0.66	1.45	8
		0.80	0.34-	5
	Implementation support.	0.73	0.76	19
	Overall mean		0.45-	
		1.60		
		0.15-		
		1.75		

Plan quality has internal as well as external principles, which were assessed and results show that under the principle of goals, overall mean value is 0.84 which indicates the low quality of plans internally. In the fact base, which is second component of internal plan quality; overall mean value is 0.74 which is moderately unsatisfactory. Within the fact base, more stress has been laid on quality of hazard assessment however, capability assessment has lower mean thus it is concluded that it needs serious attention. The mitigation policies have the overall lower mean value throughout the internal plan quality

components; within the components, maximum attention has been given towards promotion of awareness and knowledge whereas acquisition gained the least importance throughout the country. Implementation and monitoring component is slightly better than mitigation policies component whereas within the component, monitoring and implementation needs more attention.

Table (5) External Plan Quality Principles and Indexes

Principles	Indexes	Mean	Range	Number of Item
Inter-organizational coordination	State review of local plans.	0.38	0-1.10	3
		0.99	0.40-2.0	1
	State priorities for assisting local governments.	0.86	0.10-	5
	State provision of support for local governments.	0.71	1.35	9
	Overall mean		0.10-2.0	
Participation	Process of developing and updating plan.	1.13	0.15-0.98	1
	Organizational involvement.	0.84		5
		0.76	0.70-	5
	Public engagement.	0.83	1.30	11
	Overall mean		1-2.00 1.10-2.0	

Table 5 indicates that under the external plan quality principles the inter-organization coordination principle received a subpar score (overall mean 0.71). Variation among the three types of activities under inter-organization coordination is considerable. Review of plans by the State and Provinces is considerably low (mean 0.38) similarly provision of assistance to local governments from federal and provincial is also lower than the half of the maximum. A second set of coordination activities involving provisions of support for local plan development received a moderately low score (mean 0.86). For the second component (participation) overall score for participation process was somewhat low (mean 0.83) with plans to engage the public received a low score (mean 0.76).

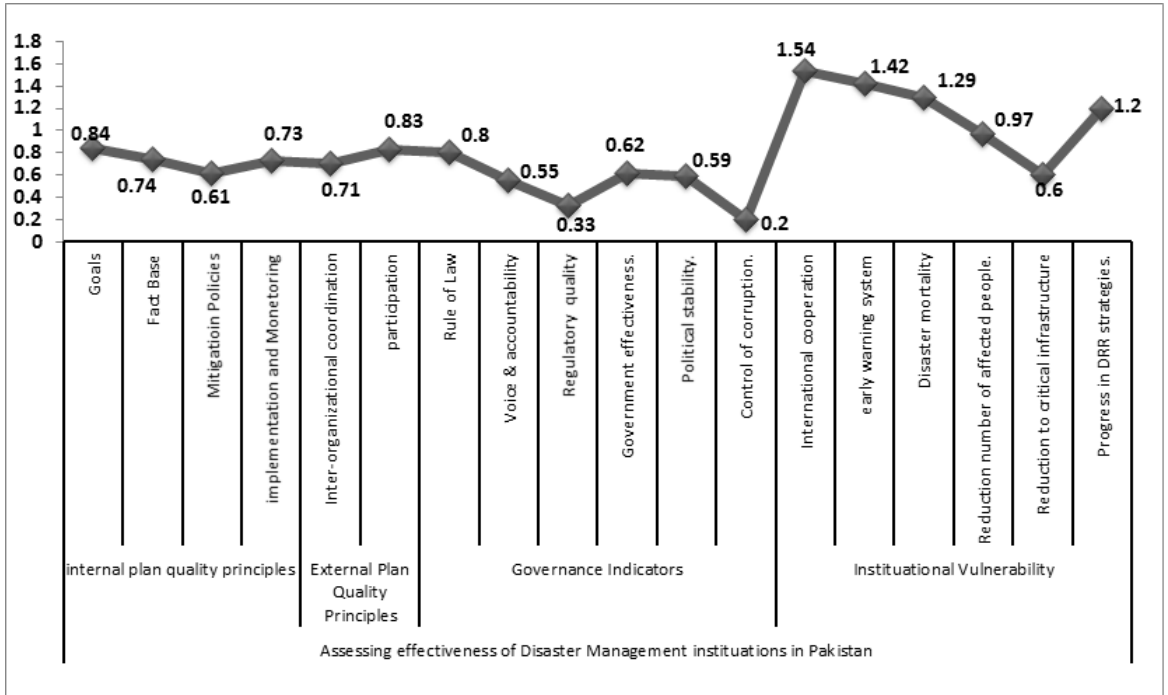


Figure (1) Assessing Effectiveness of Disaster Management Institutions in Pakistan

7. Analysis and Discussions

Institutions are more vulnerable in developing countries especially those who have been under the colonial rule and inherited corrupt bureaucracy after independence. In Pakistan, hierarchy of DM institutions is overlapping with marred and ambiguous demarcation of responsibilities. Duty of state to guarantee protection and security to public during calamity can only be ensured if DRR policies are preemptive in nature and well integrated. After 18th amendment in constitution, province and local governments are responsible for investment in DRR regulations and institutions besides development of lower level capacity building such as preparation of database, funding, human resource development, technical assistance, staff training and inclusion of DRR in educational curriculum etc. Present state of DM in Pakistan; especially in Balochistan is not encouraging as institutions are highly vulnerable to uncertain and degenerative policies, political interference and unjust distribution of resources, thus it is difficult to generate a sound DRR response in case of any catastrophic event. Moreover, from the study, it has been identified that DM which is supposed to be handled simultaneously at all tiers, is handled at provincial level in Balochistan with no / near to non existence at

district and union council level. Similarly coordination, horizontal as well as vertical, needs special attention to ensure swift and appropriate response generation.

Complexity of institutional dynamics intertwined with political interference, mismanagement of resources and corrupt bureaucratic procedural hiccups; is even more pronounced in case of Balochistan. Lack of development in fields of community resilience, infrastructural development, non-adherence to building codes and land use laws besides adoption of district level DRR capacity are few fields to mention. Balochistan received snowfall and rains in January 2017 which exposed available rescue operation capabilities of provincial and local governments wherein assistance from Armed forces was resorted to even for opening main roads linking Quetta the provincial capital with rest of the country (conditions of places other than capital were worst where public was strangled for days before evacuation / provision of relief).

To absorb the affects of any natural calamity, setting of goals and intended objectives under an overarching vision through deliberate planning is done by the planners. To achieve these objectives, evaluation of plan quality is carried out to monitor progress and applying corrections as needed. In case of this study, it has been found that directional efforts under a master plan based upon an overarching vision are very low with inter-departmental coordination moderately less than half of maximum. Similarly implementation of prepared plans and their evaluation for updating them regularly needs special attention. Federal government has enacted laws; though impulsive but emphasizing mutual actions from federal and provincial / local solutions by devolution of powers for the provision of technical and financial assistance but prime responsibilities for preparation and ground manifestation of DRR policies, capacity building, inter- departmental coordination along with public engagement rests with provincial government. An efficient and careful appraisal of plan assessment by the federal, provincial and local government is a must to ensure progress at a desired pace. However it is found wanting especially in case of Balochistan, with almost negligible attention towards CBDRM.

At the end, few aspects which needs consideration for improvement in present state of DM in Pakistan with special emphasis on Balochistan includes relook overlapping aspects existing in already enacted rules for unambiguous demarcation of jurisdiction and responsibilities at different tiers to ensure seamless fusion of efforts and synergetic response with establishment of proper inter governmental and inter departmental coordination apparatus on ground. Moreover, integration of policies, capacity building and enhancement of community resilience by initiating CBDRM efforts, incorporation of DRR awareness material in curriculum from school to universities, enactment of

DRR laws and establishment of implementation mechanism by provincial and local governments be ensured. In developing countries, many initiatives of DRR depend upon international support and cooperation, to enhance cooperation with international actors; concerned ministries, departments and educational institutions (for research purpose and establishment of a data base) are encouraged to engage with them. To this end, institutional vulnerability assessments be undertaken through international actors/ institutions because without comprehending IV and institutional perspective, DRR policies will confront severe challenges. Evaluation of effectiveness of existing DRM mechanism for further improvement be undertaken at the priority as present state of effectiveness of disaster management institutions especially at Balochistan is minimal. More focus be given towards CBDRM (development of community resilience through capacity building) shall be adopted as a core planning principle.

8. **Conclusion**

Intimate coordination with clarity of responsibilities is imperative for the success of any disaster management organization and its plans; however study reveals that this factor is wanting especially in context of Balochistan. It is an established fact that disasters are ought to happen, but its affects can be reduced through efficient DRR measures especially at district and sub district (union council) levels, thus involvement of community is of paramount importance for the successful implementation of any disaster management plan as devolution of DM responsibilities to the local communities is actually a step towards developing nation's DM abilities which is possible only by overcoming institutional vulnerabilities and good plan quality. Both of these aspects need plenty of improvement for effective disaster management in Pakistan, especially in Balochistan.

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