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## Intensive and Extensive Disaster Risk Drivers and Incentives for Disaster Risk Management in the MENA region

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The Effect of the Political Economy of the Countries in the MENA region on DRR Policies

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### **Table of Contents**

1	Intro	oduction9		
2	Met	hodol	ogy	17
	2.1	Main	Hypothesis	17
	2.2	Rentie	er states and rentier economies	18
	2.3	Driver	s of Change Analysis Tool	20
	2.4	Risk G	overnance Framework	27
	2.5	Ассо	untability Framework	31
	2.6 Chan	Challe ge) in	enges in Managing Intensive Risk (including Earthquakes and Climate Developing, Allocation States	33
	2.7	Deve	opment Spheres	36
3	Inte	ractio	n between Political Economy and Trends in Disaster Risk Phenomena	39
	3.1	Introd	uction	39
	3.2	Gene 40	ric Market Failures and Disincentives in the Provision of DRR Public Good	ds
	3.3	Effect	of Political Economy on Governance and Accountability	41
	3.3.1	L	Risk Pre Assessment	41
	3.3.2		Risk Assessment	42
	3.3.3		Risk Evaluation	43
	3.3.4		Risk Management	45
	3.3.5		Risk Communication	46
	3.4 Politic	Deve al Ecc	opment of Systems-based Interventions to Effect DRR Change within th nomy Framework	ie 47
	3.5	Applie	cation to Selected Countries	55
4	Cor	nclusio	ns	56
	4.1.1	L	Specificities of Rentier States	56
	4.1.2	2	Interaction between Rentier States and Intensive Risk	56
	4.1.3		Interaction between Rentier States and Extensive Risk	57

#### **TABLE OF TABLES**

Table 1 Comparative Performance in Progress in Implementation of HFA Priorities           11
Table 2 Grand Challenges, required changes and perceived obstacles in Disaster RiskManagement, 36
Table 3 Needs for Addressing Market Failures within the Political Economy Framework at the RiskAssessment Stage within the Risk Governance Framework41
Table 4 Needs for Addressing Market Failures within the Political Economy Framework, at theRisk Assessment Stage within the Risk Governance Framework42
Table 5 Needs for Addressing Market Failures within the Political Economy Framework, at theRisk Evaluation Stage within the Risk Governance Framework
Table 6 Needs for Addressing Market Failures within the Political Economy Framework, at theRisk Management Stage within the Risk Governance Framework45
Table 7 Needs for Addressing Market Failures within the Political Economy Framework, at the           Risk Communication Stage within the Risk Governance Framework

#### **TABLE OF FIGURES**

Figure 1 The Political-Economy Framework for Understanding and Analysing Drivers for	
Change [15]	. 22
Figure 2 Risk Governance Framework [19]	. 28
Figure 3 Disaster Risk Accountability Framework [9]	.31
Figure 4 Risk-related decision support framework [21]	. 34
Figure 5 Linkages in different decision making spheres related to development and DRM	[4]
	. 38
Figure 6 The Detailed Political-Economy System	.44
Figure 7 Proposed intervention to improve accountability	.49

### **Executive Summary**

International funding agencies are allocating resources to improve disaster risk reduction capacity on a worldwide scale, especially in developing low and middle income countries. However, improved institutional capacity in disaster risk reduction does not always translate into reduced disaster risk. While research is being directed at social, economic, institutional, natural and physical factors that contribute to disaster vulnerability, insufficient effort is directed at examining the interaction between political economy and disaster risk accumulation or reduction.

The effect of the political economy on disaster risk reduction may explain the results of the mid-term review of various Arab countries' progress in implementing the Hyogo Framework of Action. Indeed, the review concluded that while various countries have succeeded in developing national plans, strategies and institutions, limited if any achieved in allocating for progress was resources the implementation of these plans and for reducing the underlying risk namely unchecked urban expansion, environmental drivers, degradation, poor governance and poverty.

This contrast between increased capacities in DRR and limited progress in reducing disaster risk and underlying risk drivers is analyzed using a political economy analysis framework that looks at institutions, structures and processes within various countries. In particular, the phenomenon of the rentier economy, and its potential effects on the provision of public goods including disaster risk management, is examined.

The analysis identifies areas where future effort should be directed to promote incentives for DRR, taking into account the political economy in the region, while adopting a systems approach to DRM focusing on the national, local, private sector and individual/household levels.

In order to analyze the effects of political economy on disaster risk reduction a methodology is first developed that combines a political economy analysis framework tools with a risk governance framework tool. This then allows for the analysis of each of the risk governance stages using the political economy analysis tool.

The developed methodology may be applied to analyze the performance of a variety of countries worldwide, and to identify areas where interventions are expected to be most effective. The methodology developed in this report will be used to study disaster risk management incentives in Algeria, Egypt and Lebanon (which have varying degrees of production and rentier economies), with particular emphasis on earthquake intensive risk and corresponding insurance practices.

Some of the main conclusions are succinctly summarized below:

- Rentier states and economies are not based on the provision of public goods, including prevention measures for DRR, but rather on patronage politics including compensation for disaster risk losses.
- The production character of few autocratic states, as opposed to the allocation character of rentier states, may explain the perceived anomaly of the success of some DRR states in reducing disaster risk, including Cuba and Vietnam.
- The drivers-for-change political economy analysis framework can be used to analyze the interaction of the various stakeholders within rentier states, and the corresponding shortcomings, regarding the decision making process on DRR.
- While intensive earthquake risk is characterized by a degree of uncertainty which necessitates the involvement of affected

populations in the disaster risk management decision making process, the fiduciary system of government within rentier states makes such a participatory approach difficult to realize.

- To effect DRR change there is a need to direct efforts on the decision making process related to DRR and not solely on the development of capacities, policies and strategies.
- A system-based approach to resolving issues of decision making, including participation and accountability is proposed by proposing simultaneous interventions in different development spheres.
- Specific recommendations within development sphere are developed by analyzing the stages of the risk governance framework developed by the international risk governance council using the political economy decision making framework developed by the UK Department of International Development.

### 1 Introduction

In many low and middle income countries unchecked development is increasing disaster risk and corresponding losses. In turn, this is jeopardizing the achievement of the development goals, including the Millennium Development Goals (MDGs), thereby intensifying poverty and abject poverty. It is against this background that the Hyogo Framework for Action [1] sets five priorities for disaster risk reduction (DRR) as follows:

- 1. Ensure that disaster risk reduction is a national and 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.
- 5. Strengthen disaster preparedness for effective response at all levels.

While some governments have achieved significant progress in these five priority areas, others still lag behind. For the purpose of this report, it is important to first identify the comparative performance and progress in these five priority areas:

- Priority 1: The HFA mid-term review [1] reports clear and documented progress in the achievement of this Priority for Action, particularly in the development of policy and legislation and in strengthening multi-sectoral institutional systems and platforms. However, more limited progress was achieved in the decentralization of responsibilities and financial resources for disaster risk reduction, and the systematic involvement of communities in the development of strategic plans for DRR.
- Priority 2: The mid-term review of the Hyogo Framework for Action submitted for the 2009-2011 reporting cycle [1] reports

that only 46 out of 83 countries reported having multi-hazard risk assessments that could inform the planning and development decisions. Furthermore, the review concludes that there are still very few countries reporting on risk assessments in schools and health facilities. Even where these exist, they tend to be at an individual facility level rather than providing an assessment of the sector as a whole.

- Priority 3:The HFA mid-term review [1] indicates little progress in the field of education for disaster risk reduction. According to the interim country reports, 24 out of 70 countries reported substantial progress, whereas 43 indicated weak or average progress. Furthermore, very few countries report on including disaster risk reduction in university and professional training. The mid-term review identified social learning in communities as an important area overlooked when designing knowledge and education activities in DRR.
- Priority 4:The mid-term HFA review [1] states that many countries report challenges in linking the risk assessment to development processes at the national and local levels. This partly explains the HFA conclusion that progress on reducing underlying risk factors has been limited, with only 28% of countries rating their progress at the highest Level of 4 or 5. Furthermore, in some cases, the review recognizes progress within lower-middle income countries in integrating DRR into national development plans, climate change policies, and poverty reduction strategies; but less substantial progress in integrating risk reduction into those sector strategies that address the underlying drivers of risk.
- Priority 5: The mid-term HFA review [1] states that 80% of reporting countries indicated that there are contingency plans and procedures to deal with major disasters and reported the existence of operations and communication centres, search

and rescue teams, stockpiling of relief supplies and shelters. However, financial allocations for managing response and well established emergency funding mechanisms, especially at the local level, remain weak.

Table 1summarizes the progress reported in the HFA mid-term review [1].

	HFA mid-term review [1]
Priority for Action 1	Limited progress was achieved in the decentralization of responsibilities and financial resources for disaster risk reduction, and the systematic involvement of communities in the development of strategic plans for DRR.
Priority for Action 2	46 out of 83 countries reported having multi-hazard risk assessments that could inform their planning and development decisions. Furthermore, the review concludes that there are still very few countries reporting on risk assessments in schools and health facilities.
Priority for Action 3	Very few countries report on including disaster risk reduction in university and professional training. Social learning in communities is overlooked when designing knowledge and education activities in DRR.
Priority for Action 4	Less substantial progress in integrating risk reduction into those sector strategies that address the underlying drivers of risk.
Priority for Action 5	Financial allocations for managing response and well established emergency funding mechanisms, especially at the local level, remain weak.

 Table 1
 Comparative Performance in Progress in Implementation of HFA Priorities

This lag in progress, which was also identified in the GAR 2011 reporting period, has been attributed to various causes as follows:

• Williams [2] provided a thorough discussion on how political economy considerations may hinder the advancement of disaster risk management considerations. Some of the political incentive problems affecting disaster risk reduction

provision were identified in the report as 1. Disincentives towards public good (preventative DRR measures) provision, 2. Rent-seeking and corruption, 3. Political cost of controlling settlement and land use, 4. Powerful interest groups that create environment risk, and 5. Vested interests that block organization reform. The rent-seeking cause identified above is expanded further in this paper.

- In an accompanying paper, Scott ad Tarazona [3] studied the potential benefits and constraints of decentralization on DRR activities. They identified conditions which must be met for full decentralization (i.e. administrative, political and financial decentralization) of DRR activities to be successful; namely: 1. Incentives that create strong political interest in and engagement with DRR issues at the local level, 2. Adequate technical capacity at the local level, both in relation to DRR and for general government duties, 3. Good levels of financial resources in general, and also a mechanism for ensuring that DRR funds are not diverted to other areas, 4. High levels of civic education and public awareness about DRR, and 5. Strong national government leadership and enforcement mechanisms. When most of these conditions are not met, it concluded that a deconcentrated system of was decentralization (limited to administrative decentralization) may provide benefits as an interim step.
- In another background report to the GAR 2011 conference, O'Donnell [4] identified three main complex challenges facing future disaster risk management efforts; (namely: 1. Unbuilding risk, 2. Anticipating new risk patterns and 3. Sustaining change) that require a number of interlocking and simultaneous changes in the national, local, private sector and individual/household spheres of development. To this end, a systems approach to disaster risk management was proposed

to devise and review interventions that target 1. Policy and budgeting, 2. Regulation, incentives and enforcement, 3. Demand, safety and growth and 4. Business opportunity leverage points at the national, local, individual / household and business development spheres respectively.

The International Risk Governance Council (IRGC) put forward a white paper on risk governance [5], which proposed a risk governance framework that distinguishes between analyzing and understanding a risk (Technical and Social Assessment Stage) – for which risk appraisal is the essential procedure; and deciding what to do about a risk, where risk management is the key activity. The framework is divided into four stages (pre-evaluation, assessment, appraisal and management), pivoted fifth fundamentally important around a communication stage. Governance factors were also identified, among others, as the principal drivers of risk in the Global Assessment Report 2009 [6], which noted the importance of improving governance in DRR through systems of accountability, transparency and participation. The importance of governance was also noted by Gupta [7] who related the five priorities of action of the Hyogo Framework of Action (HFA) to questions of accountability and proposed a framework for accountability of DRR. The issue of good governance and transparency and its relationship to access to information was highlighted by Herranz [8] who identified structural and political barriers which hinder both the capacity and incentives of governments to produce information, and the ability of citizens to claim their right to information and to use it in order to demand better governance on DRR. Olson et al [9] provide an important discussion on the interaction between public accountability and the role of the media, with

several case studies in disaster affected countries and neighboring "mirror" countries.

- Johnson [10] identified important components of regulatory frameworks which can create an enabling environment for reducing disaster risk, including: 1. Enabling access to safe land, 2. Regulations that require less oversight from government, 3. Laws and policies from the national level that require local governments to take responsibility for planning and building and include budgets and resources that enable local governments to fulfill these tasks and finally 4. The need for investments in the capacity of local governments to plan for and encourage safe development.
- Krishnamurty [11] provided an important discussion on the interaction between employment policies, economic growth and disaster risk reduction. He concluded that, based on the Washington consensus regarding macroeconomic policies, the full employment objective ceased to be significant for policy makers from the 1970s. This in turn lead both explicitly and implicitly to lower investments in infrastructure and increased poverty thereby increasing vulnerability to disaster risk. Krishnamurty identified several links between employment and disaster risk reduction, including: 1. Jobs-rich, pro-poor employment-based, economic growth which directly contributes to income and savings and therefore to the resilience of the population, 2. Environment-friendly employment-based economic growth which can avert environmental degradation and ensure that people live and work in safe environments, 3. Diversification of employment, as a result of diversification of economic activities and investment, which results in the spreading and reduction of disaster risk, 4. Spatial redirection of employment, as a result of spatial redirection of economic activities, away from

congested, high risk areas to safer locations, 5. Public employment programs, which if designed to be resilient enough to expand and contract as needed, can play a significant role in maintaining consumption and income levels and protecting assets and human resources during crises, 6. Training programs which must be linked to capacities in disaster risk reduction including safe construction while accounting for the hazards and vulnerabilities of the various regions within a country, and 7. Employment with social protection which provides a cushion against sharp declines in earnings due to the occurrence of natural hazards thereby reducing the vulnerability of the population.

None of the above reports claim to offer a unique or mutually exclusive explanation as to the gaps in progress on DRR and the interaction between DRR and the achievement of the development goals. Indeed, there is clear evidence emerging from various comparative studies that the above factors must be viewed and analyzed in combination in order to comprehend the success, or otherwise, of disaster risk reduction activities in a particular country and to identify interventions for effecting change in the disaster risk picture within various countries. It is against this background that this report was conceived to determine the effect(s) of the political disincentives and incentives for disaster risk reduction.

Section 2 describes the adopted methodology for analysis, including a brief discussion on the main features characterizing the political economy analysis tool, rentier economies and rentier states, the stages within the risk governance framework, the spheres of development and the components of an accountability framework for DRR. Section 3 analyzes the key factors that affect the strength of political incentives, and disincentives, for managing disaster risk, including social structures, state fragility, formal and informal institutions, nature of political competition, systems of political patronage, role of interest groups and citizen pressure using the political economy analytical framework put forward by [2], and informed by the work of the Department for International Development [12] in the UK and the Clingendael Institute for the Netherlands Ministry of Foreign Affairs [13]. Finally, conclusions and recommendations are provided in Section 4.

### 2 Methodology

#### 2.1 Main Hypothesis

The methodology adopted in this report is based on the following hypothesis:

The specificity of the political economy, and the manner in which it shapes and interacts with concepts of governance, accountability, decentralization and development spheres, plays an important role in accentuating different political disincentives for disaster risk reduction in different countries. The last thirty years have witnessed an increase in the power of pecuniary interest within the decision making framework, manifesting itself partly in the rise of the banking, insurance and real-estate sectors within the global economy which led to an increase in exposure to disaster risk. The rise of pecuniary interests, at the global level, has led to an emphasis on curbing inflation, at the expense of government spending and full employment which led to an increase in vulnerabilities. This trend is further accentuated in developing rentier countries.

It is the intention of this report to elaborate and test the above hypotheses, by using the available data and by refining existing analysis tools, to determine, if possible, the most suitable interventions for supporting incentives and drivers for change in disaster risk reduction practice.

In the remainder of this section, several concepts relevant to disaster risk reduction are discussed; namely a political economy analysis tool for analyzing drivers for change, specificities of the rentier economy from a DRR perspective, risk governance and accountability frameworks, interaction between intensive risks (such as earthquakes, drought and climate change) and governance, and the design of multi-dimensional, simultaneous DRR interventions in different development spheres.

#### 2.2 Rentier states and rentier economies

In a political economy context, the concept of a rentier state is chosen for lack of a better concept to characterize the prominence of the oil economies in various countries and regions. Rentier economies possess the following main characteristics [14] and [15]:

- A rentier economy is an economy which relies on substantial *external rent*. The existence of an internal rent, even substantial, is not enough to characterize a rentier economy since it cannot be sustained without the existence of a vigorous domestic productive sector.
- In a rentier state, as a special case of a rentier economy, only few (those in power) are engaged in the generation of this rent. Furthermore, by depending on income from abroad the state becomes independent of its natural domestic constituency. Hence, the predominant function of a rentier state is allocation, unlike production states which depend on domestic revenue through taxation.
- In states fragmented along sectarian lines, it is possible to extrapolate this characteristic so sectarian leaders, who wield the power, are the principal recipients of the external rent in the economy.
- The importance of migrant remittances is a main distinction between a rentier economy and a rentier state: whenever remittances are important this tends to give a rentier character to the economy as a whole, but the economic base of the state remains unchanged. However, the prominence of a remittance based rentier economy from a DRR perspective implies that the state is not providing sufficient basic public goods to its citizens, including creation of jobs through the development process, which in turn puts in doubt whether the state considers it its task to provide DRR public goods.

• There is no such thing as a pure rentier economy. However a rentier economy may be defined as one where rent situations dominate i.e. within those states whose revenue derives predominantly (more than 40%) from oil or other foreign sources and whose expenditure is a substantial share of GDP.

Rentier states need not necessarily depend on oil as an external income but may include other sources such as location rent, foreign aid, and remittances, amongst others. In this regard, oil and resource rich countries, as well as resource-poor countries, may possess a sort of a rentier economy with various undertones of rentier mentalities. Finally it should be recognized that oil rent, like other forms of external rent, gives rise to a secondary wave of rent generations including the real estate and stock market speculation.

From a DRR perspective, the predominance of a rentier state impacts on:

- The conventional role of the state as the provider of publicgoods (which includes DRR).
- The role, ability and mentality of citizens to hold the state accountable in its delivery of development and DRR public goods.
- The ability of citizens to demand DRR public goods, where those benefiting from the allocation are unable to demand progress on the reduction of various risk drivers including good governance, environmental degradation, unchecked urban expansion and poverty.
- The attitude of citizens regarding the use of any publicly available information on disaster risk to hold the government accountable. Citizens are also less likely to successfully lobby the government to adopt good risk governance practices including the transparency of disaster risk management decisions and the public availability of disaster risk information.

On the other hand, the predominance of production economies within certain autocratic states may provide an explanation for the apparent anomaly in DRR performance as identified by several researchers including Williams [2]; namely that certain autocratic countries, such as Cuba and Vietnam are strong performers in DRR.

The influence of the predominance of rent within various countries in the MENA region on DRR incentives should be studied and linked to the broader context of the global phenomenon of recent trends regarding the growth of finance capital and its interaction with industrial capital.

### 2.3 Drivers of Change Analysis Tool

Traditional DRR interventions have focused on raising awareness regarding disaster risk and building capacities to develop strategies and policies for DRR. Notwithstanding the importance of the above interventions, it is the nature of the political economy which determines the power map and the decision making process within a country, which in turn will inevitably determine whether DRR policies and strategies will be turned into actions and to what extent and with what rate of success. Hence, there is a need to select and adapt a political economy analysis tool to analyze the incentives and disincentives for effecting DRR change within a country.

The UK Department for International Development [12] and [16] has put forth an analytical framework for understanding and refining drivers of change, with the intent of applying it to analyze the politics of development, which inevitably includes DRR. The framework allows analysts to trace where and how formal and informal, internal and external political actors and interests interact through given institutional arrangements to influence decisions about how resources are used, produced and distributed. From a DRR perspective, resources include land, clean environment, water, climate natural resources including oil and gas, and state revenues accrued through taxes and/or "rent" collection in rentier economies.

Figure 1 shows the selected framework [16], which is briefly explained in this section. The framework is adapted in Chapter 3 to analyze the incentives for effecting DRR change within a broader political economy context.



Figure 1 The Political-Economy Framework for Understanding and Analysing Drivers for Change [16]

The framework recognizes that any political process, as the one shown in Figure 1, is framed by a wider national and international environment of economic, political, social and cultural processes and institutions. Therefore, the political process should be considered as occurring within known institutional contexts and constantly interacting with the wider national and international environments. It is important to differentiate between three distinct but related levels, in any political system, within which the politics of DRR take place [], [] and []:

- Institutions which set the rules of the game.
- The level at which games within the rule occurs (the <u>game</u> <u>within the rules</u> or <u>political processes</u>).
- The above two levels take place within a broader context of <u>structural features</u> that include the history of the state, natural and human resources, trade and investment, urbanisation, etc.

Obstacles hindering DRR change are summarised below under the three headings above, based on the discussion provided by Williams [2], together with an elaboration and discussion on their specificities within allocation / rentier states:

## • Structures

Intensive risk in general it is often stated that as the severity of the risk increases so does the economic justification and political incentive to embark on disaster risk reduction policies [2] and references therein. However, in Allocation / Rentier states the presence of limited democratic competition combined with reliance on external rent, leads to a disproportionate emphasis on insurance against disaster losses which plays an important role in securing economic assets "producing external rent" but rarely reach the most vulnerable communities or reduce human losses. The over reliance

on the insurance sector (as opposed to a balanced portfolio of prospective, corrective and compensatory disaster risk reduction options [18]) may also be interpreted as a consequence of the increasing importance of pecuniary interests associated with the finance and banking sector in general over the last few decades in both allocation and production states [17].

- Extensive risk International experience shows that political incentives for reducing extensive risk will only exist when the effects of such a risk have sufficient visibility, lead to significant economic losses, and where the affected population can lobby as a unified "voice" [2] and references therein. This is the case despite the evidence worldwide that it is more cost-effective for governments to invest in reducing the more extensive risks they retain, using a mix of prospective and corrective DRM strategies, rather than absorbing the annual expected losses [18]. The political incentives for reducing extensive risk are marginalized further in allocation / rentier states due to the lack of participation of populations and communities exposed to extensive risk in the risk management decision making process. This worldwide phenomenon is even further accentuated in Allocation / Rentier states by the function of the state which is not related to the provision of public goods [14] and [15] (e.g. prevention measures that benefit all the population) but rather patronage goods (e.g. relief aid on a regular basis due to repeated extensive disaster losses).
- **Political Geography** which leads to a focus of DRR efforts in the centre where political and economic interests, and human and economic exposure, are concentrated.

 Social Structures where divisions along several factors including income groups have an important impact of incentives for DRR. The phenomenon of illegal settlements and slums in the MENA region is widespread where urbanism ratios reach 43, 67, 90, 37, 59 and 35 % and slum to urban ratios registers 40, 50, 57, 86, 92 and 94 % in Egypt, Iraq, Lebanon, Sudan, Mauritania and Somalia respectively according to UN HABITAT Statistics [19]. Many cities have failed to address both extensive and intensive disaster risk associated with illeaal settlements [2]. In rentier states and economies this is further attenuated by the role of the state vis-à-vis the provision of public goods in general.

#### • Institutions

- o Legislation which must clearly delineate rules and responsibilities for various DRR agencies and individuals agencies with clear accountability chains, within develop mechanisms for imposing the rules and impose penalties on those failing to abide by the rules. In rentier states, DRR rules tend to focus on response and relief measures rather than prevention and mitigation. Furthermore, the enforcement of DRR rules (as a form of public goods), as is the case for the enforcement of many other rules, is carried out in a selective manner (as manifestation of patronage politics). Finally, a implementation procedures are rarely developed for the implementation of decrees and laws; and resources (both financial and human) are insufficiently allocated for the implementation of national plans and strategies [18].
- **Decentralisation and Deconcentration** which may improve incentives for effecting DRR change subject to

over-coming capacity constraints at the local level. However, in rentier economies where certain regions have a concentration of the "rent-generating" resource, there is significant resistance by the centre against decentralisation. This in turn intensifies the challenges encountered when attempting to transform and translate national strategies and policies into local policies, action plans with appropriate human and material resources.

- Informal Institutions which underline the implicit or explicit DRR decision making process in most developing and The predominance of informal political rentier states. undermines processes explicit discussion and DRR transparency regarding decision making mechanisms. The challenge in rentier states is not only that there are seldom agreed and established rules of the game which can provide for a stable context for DRR decisions to be incorporated into development policies It is also that existing institutions of and strategies. political and economic governance do not promote development policies and strategies, and certainly not pro-poor disaster – resilient development.
- Political Processes
  - Academia, Research Centres In developing and rentier states, Academic advice is not directly and transparently incorporated into the decision making process.
  - Civil Society A distinction has to be made between Civil Society Organisations (CSOs) and Non Governmental Organisations (NGOs) funded directly by the state, and others which operate independently, where the latter are more likely to play an independent role and disseminate objective information to all stakeholders.

However, due to accountability and governance issues, CSOs and NGOs have limited access to decision makers.

- **Citizen Pressure** In general citizen pressure is quite limited for effecting DRR change except in the direct aftermath of disasters. This problem is accentuated further in rentier states due to the relationship between the citizen and the state that has an allocation function.
- Political Elite Usually the political elite plays a positive role in calling for DRR change when it shares the same exposure and vulnerability profile as the rest of the population or when it fears any political destabilizing effect of future disasters. Neither of these conditions are present in rentier / allocation states.

The proposed distinction between allocation and production states regarding effecting DRR change referred to in this paper, is not meant to become a predictive tool to dictate which DRR policies and strategies are used. Instead, it is meant to provide a method for: 1. Exploring the institutional arrangements through which decisions are made, 2. Identifying drivers for effecting DRR change, and 3. Mapping and locating the various sources and drivers of resistance against effecting positive DRR change, including their power on the decision making process and policy implementation. The eventual objective of the paper is to provide a tool for forging common interests and alliances around the fundamental institutions in terms of DRR decisions; it is not to be used for analyzing and forging common interests around policies.

#### 2.4 Risk Governance Framework

The International Risk Governance Council (IRGC) proposes the use of a risk governance framework [5] and [20], which makes a clear distinction between analyzing and understanding risks, and between deciding what to do about these risks, as shown in Figure 2. This distinction reflects the need for a clear separation of the responsibilities for risk appraisal (Technical and Social Assessment) and risk management in order to ensure the objectivity and transparency of both activities. This is in accordance with the political economy analysis tool framework, which stresses the importance of analyzing the decision making process regarding DRR policies and strategies.



Figure 2 Risk Governance Framework [20]

Below is a brief description of each of the stages, together with a discussion, where applicable, of their specificities within allocation states.

**Pre-Assessment Stage**: This stage identifies the perspectives of various stakeholders on risks and the major assumptions and methodologies for assessing the risk through a four step process: 1. Risk framing which underlines a common understanding of risk, 2.

Early warning and monitoring of risks, 3. Risk pre-screening models and practices and corresponding capability requirements, and finally, 4. Selection of major assumptions, methods, conventions and procedural rules for assess the risk and associated societal concerns. The nature of the decision making process within any political economy, as elaborated in political economy analysis framework discussed in Section 2.3 will play an important role in determining the outcome of this stage. For example, in a rentier state, it is likely that gatekeepers may prevent risk signals arising from certain economic activities from being recognized. In addition, risks may be wrongly perceived to have local rather than national consequences. In addition, the views of certain stakeholders (e.g. those living in resource rich regions or in urban slums) may be ignored.

**Technical and Social Assessment Stage**: Risk appraisal comprises both a scientific risk assessment, which includes an assessment of the hazard frequency, exposure to the hazard and consequences (including the probability of it happening); and a societal concern assessment including the associations and perceived consequences (including societal benefits and risks) associated with a hazard. A flawed decision making process may lead to scarcity in collating and analyzing data and / or misuse of such data regarding a particular risk (related to both scientific assessment and societal concerns). It may also lead to inadequate addressing of societal and stakeholder concerns.

**Evaluation Stage**: This stage of the risk governance framework is intended to ensure that the evidence based on scientific facts is combined with societal values considerations when making the judgment on the tolerability of risk, according to three main categories:

• Acceptable where further reduction in the level of risk is considered unnecessary.

- **Tolerable** where the level of risk may be acceptable due to its benefits, but subject to appropriate risk reduction measures and considerations.
- Intolerable where the level of risk must be reduced, irrespective of cost.

A flawed DRR decision making process may lead to a lack of agreement and sufficient discussion on the value of saving a human life (which is at the core of the tolerability judgment). It may also lead to inadequate attention given to societal concerns regarding the issue of multiple fatalities.

**Management Stage**: All tolerable risks will need appropriate and adequate risk management practices to retain, retain and reduce, or transfer the risks, based on a decision framework to select the most appropriate measures. A flawed DRR decision making process may lead to an underestimation of the benefits of various risk reduction measures. More gravely it may lead to a lack of delineation of responsibilities as to the entity responsible for managing the risk. Finally it may lead to a lack of regulatory mechanisms for allocating resources and ensuring implementation.

Communication Stage: Communication and coordination with all stakeholders is implicit to all stages within the risk management Furthermore, once the risk management decision is framework. made, communication should explain the rationale for the decision and allow citizens / stakeholders to make informed choices about the risk and its management, including their own responsibilities. A flawed DRR decision making process may result in a one-way rather information than two-way sharing In addition. process. communication, participation and coordination may not be commensurate to the risk level and risk category (to be discussed further in Section. 2.6). Communication may be wrongly used as a substitute to the collation of stakeholders' perceptions of risks.

To conclude, combining a political economy analysis framework with a risk governance framework allows the examination of governance issues as a profoundly political matter, established and maintained by political processes which may be identified and traced.

### 2.5 Accountability Framework

Olson et al developed an accountability framework [9] for DRR, shown in Figure 3, which stresses the importance of participation, information sharing and transparency for ensuring the accountability of DRR decisions.



Figure 3 Disaster Risk Accountability Framework [9]

In the accountability framework shown in Figure 3, the actor (risk management decision maker) has an obligation to explain and

justify their plans of action and conduct (which should be enforced by law for the framework to succeed), including any decisions not to take any decisions or actions regarding disaster risk (which implies that a judgment was made regarding the tolerability of the disaster risk under consideration). Furthermore, the views of various stakeholders, and society at large, should be taken into account prior to the final decision being made.

Access to information plays a very important role in ensuring accountability. Furthermore, in many developing and rentier states, information related to DRR remains undisclosed, or at best forms part of a one-way information sharing process from the decision maker to the various stakeholders and society. In addition, access to information, when not complemented with the ability of citizens to demand and use information, will not lead to improved governance in DRR. Herranz [8] identified the following structural and political barriers which hinder both the capacity and the incentives of governments to produce information and use it to demand better DRR governance and improved DRR public services:

- 1. Governments may not actively support the right to information, particularly in undemocratic political systems.
- 2. Citizens may not be aware of their legal rights to information, or may be reluctant to assert it, particularly in undemocratic political systems. Furthermore, there are structural barriers to poor people and vulnerable communities using information including relatively low literacy rates, limited awareness of rights and limited access to internet in low income households.
- 3. The capacity of public bodies to provide information may be weak.

The work of Olson et al [9] and Herranz [8] provide a valuable contribution to the debate on DRR. However, as with risk

governance, accountability for DRM and DRR decisions is best analyzed using the political economy framework described in Section 2.3. This allows the consideration of the issues of accountability and *political will* (often identified as the missing element in the promotion of sound DRR practices) in a less personal manner and puts them in the context of the political processes and institutions discussed in Section 2.3.

#### 2.6 Challenges in Managing Intensive Risk (including Earthquakes and Climate Change) in Developing, Allocation States

The need for adopting a participatory approach, which includes an accountability framework, is more urgent in cases when the risk problem is characterized by a large degree of uncertainty, as for example applies to the case of earthquake and climate change risks [5]. In these cases, the stakeholders should include staff of various concerned agencies, external experts, industry and directly affected groups. Together these actors are expected to reach a consensus on the extra margin of safety (and associated investment costs) to offset the large degree of uncertainty, thereby avoiding the uncertain risk problem transforming into a disaster. The same concept has been adopted by various industries in Europe, including the oil and gas industry [21], regarding the need for the involvement of stakeholders as shown in Figure 4[22], where it can be seen that the framework takes the form of a spectrum of decision bases, ranging from those decisions dominated by purely engineering concerns (in cases where the risks are well understood with no uncertainty associated with it and where as a result there is no need for significant stakeholder consultation) to those where company and society values are the most relevant factors (in very uncertain, novel and / or challenging situations, where the risks are uncertain and not very well understood / accurately determined and where as a result there is a fundamental need for stakeholder consultation).



Figure 4 Risk-related decision support framework [22]

The decision regarding the categorization of the risk problem into one of the four risk categories (simple, complexity-induced, uncertainty-induced and ambiguity-induced) proposed by the IRGC [5], or one of the three decision making contexts proposed by the oil and gas industry [21] and [22], should be carried out by a team of technical risk and societal concern assessors, risk managers, stakeholders, and representatives of relevant agencies, based on a set of predefined procedures and standards to avoid "Nonlegitimate" influence from lobbyists acting as gatekeepers, or from other stakeholders as will be discussed in Section 3. Whether using the IRGC proposed risk governance framework [5], or the decision making context framework proposed by the oil and gas industry [21] and [22], earthquake, drought and climate change risks (which are the main intensive risk affecting the countries under consideration) have a large degree of uncertainty and accordingly fall under uncertainty-induced risk problems using the IRGC framework [5] or under Decision Making Context B in the Energy Sector Framework

[21], which would necessitate in both cases the involvement of outside stakeholders (i.e. the population at large).

The International Risk Governance Council (IRGC) recognized that risk management practices, including participation in the decision making process, is greatly influenced by political economy considerations. The IRGC defines four government styles with different decision making characteristics [5]:

- **The Adversarial Approach**, characterized by procedural rules, scientific justification and subject to professional and public scrutiny.
- The Fiduciary Approach, characterized by the lack of procedural rules and where the decision making process is confined to group of patrons. Furthermore, decisions are not subject to public scrutiny.
- The Consensual Approach, characterized by flexible procedural rules and where negotiations on public policy decisions, takes place behind closed doors.
- The Corporatist Approach, which is characterized by strict procedural rules away from the negation table and where decisions on public policy are highly visible with limited public control.

When we combine the uncertainty-induced risk problem, and the associated need to include the affected public in the decision making process regarding risk management, with the lack of public scrutiny and procedural rules in the Fiduciary approach, and to a certain extent the Consensual and Corporatist approaches, the scope of the challenges facing risk governance and risk management in rentier states becomes clear.

Notwithstanding the importance of identifying the above four government approaches, the political economy framework

described in Section 2.3 provides greater flexibility in analyzing the institutions and processes involved in DRR decision making and in identifying drivers for change.

#### 2.7 Development Spheres

O'Donnell [4] identified gaps and challenges in achieving progress in DRM, stemming from the governance, political and social systems in place, as summarized in Table 2.

These obstacles are aggravated by the fact that most disaster risk management activities are yet to be incorporated within the development process and tend to operate in an isolated context within one development decision-making sphere or separately within several spheres.

To address this shortcoming, O'Donnell [4] proposed a systems-based DRM intervention policy which targets the development system as a whole by targeting action in four main levels (national, local, household and private) through a combination of leverage points to shift the dynamics of the system towards effecting DRR change.

Four requirements were identified as essential for the DRM systemsbased interventions to successfully trigger and effect system change: 1. Multi-sectoral, 2. Adaptive, 3. Possible to initiate across the system simultaneously, 4. Self-replicating.

**Table 2** Grand Challenges, required changes and perceived obstacles in Disaster RiskManagement,

Grand Challenges	DRR Change Needed	Obstacles
Unbuilding Risk in both new and existing settlements, communities, livelihoods and sectors	<ul> <li>Building code enforcement</li> <li>Urban redevelopment plans</li> <li>Incentives for safe building practices</li> <li>Integration of DRM into individual/household and private sector decision making</li> </ul>	<ul> <li>Lack of priority</li> <li>Disincentive for prevention</li> <li>Lack of risk governance frameworks</li> </ul>
Anticipating new risk patterns to advance scenario and intervention planning	<ul> <li>Identification of potential hazard scenarios</li> <li>Exploration of secondary effects and needs</li> </ul>	<ul> <li>Lack of accountability</li> <li>Lack of transparency and participation</li> <li>Tendency to filter planning through lens of last disaster, if any</li> <li>Lack of access to information and lack of linkages between various stakeholders</li> </ul>
Sustaining change in normal development dynamics by maintaining and improving resilience	<ul> <li>Maintenance of incentives to households and private sector.</li> <li>Allocation of DRM funds.</li> <li>Maintenance of DRM capacities.</li> <li>Incorporation of DRM and CCA considerations into the development process.</li> </ul>	<ul> <li>Competing priorities.</li> <li>Lack of rigorous monitoring and evaluation.</li> <li>Lack of risk governance frameworks.</li> <li>Lack of transparent decision making frameworks.</li> </ul>

O'Donnell [4] suggested a particular combination of leverage points for aligning change through the different decision making spheres, as shown in Figure 5.



Figure 5 Linkages in different decision making spheres related to development and DRM [4]

However, O'Donnell [4] assumes the existence of formal institutions related to development spheres, if not to DRR change. Furthermore, the interventions are targeted at effecting change in national policies, individual and household demands, incentives for local development, and business opportunities for the private sector. Notwithstanding the importance of the above interventions, there is a need, from a political economy perspective, to design interventions that will help build coalitions for effecting DRR change in the decision making political process as described in Section 2.3.

### 3 Interaction between Political Economy and Trends in Disaster Risk Phenomena

### 3.1 Introduction

One of the main objectives of the call for abstracts for the 2013 Global assessment Report on Disaster Risk Reduction is to encourage research on how public regulation and private investment shape disaster risk, taking into account trends in the global political economy over the last 30 years. The background Note to the GAR call for papers [23] poses the following important questions to trigger research:

- 1. What has been the relationship between changes in the broader political economy since the 1970s and disaster risk trends? If the political economy has generated incentives for greater (or lesser) risk-taking at all levels, how has this manifested in patterns of disaster risk?
- 2. How do investment decisions in the private sector (in a context of incentives and regulation by the public sector) increase levels of disaster risk and, in some cases, transfer risk from private investors to governments and to other sectors of society?
- 3. To what extent are increasing disaster losses, in a context of reduced fiscal space, in both the public and the private sector, leading to a greater consideration of disaster risk in investment decision making? What are the tradeoffs between longer-run and short-run perspectives in such decisions, and what combination of incentives and regulation could encourage more investment in risk reduction and an optimization of risk management strategies?
- 4. To what extent do austerity measures result in higher levels of socio-economic and/or physical vulnerability?

This chapter will try to answer these questions using the political economy analysis framework discussed earlier in Section 2.3, with particular emphasis on rentier states.

### 3.2 Generic Market Failures and Disincentives in the Provision of DRR Public Goods

The traditional argument for studying the effects of political economy on disaster risk reduction stems from market failures, coordination problems and social protection concerns. Williams [2] identified the following *generic* market failures:

- Disaster risk reduction policies and programs are public goods which deliver shared benefits to the population at large. These tend *not* to be provided by the markets and require collective action, assumed to be best provided by the government.
- Information imbalances where insufficient information is made available to the general public on the level of hazards, exposure, vulnerabilities and associated risks related to the country at large and to everyday decisions they take.
- Externalities where the actions of one group of resource users (a small minority) impose external risks on other groups (the majority of the population).
- Behavioural factors which show that individuals tend to discount low-probability risks even if associated with high consequences.
- Coordination challenges, where most DRR activities require close coordination and participation by various public sector agencies, the private sector and local authorities and communities.
- Social protection and poverty reduction, which can only be achieved by the provision of public goods related to DRR.

It is useful to identify incentives for addressing the above market failures using the political economy analysis tool [12] and [16] discussed in Section 2.3, applied to the different stages within the risk governance framework [20] discussed in Section 2.4.

#### 3.3 Effect of Political Economy on Governance and Accountability

Figure 6 shows the detailed political economy framework analysis tool, with more details introduced into its constituting elements. This section will attempt to analyze the governance and accountability DRR needs identified in Section 2.3, 2.4 and 2.6 using the political economy framework analysis tool.

#### 3.3.1 Risk Pre Assessment

Table 3 shows the needs for addressing market failures within the political economy framework, at the risk pre-assessment stage within the risk governance framework.

Channe	
Stage	Needs for Addressing Market Failures in Risk Pre-Assessment
Influences, Demands, Oppositions	<ul> <li>Raise the awareness of all the relevant stakeholders and society at large on building demand for a common understanding for all risk issues being addressed and those that should be addressed at this stage, including the goals of the activities generating the risk and the acceptable possible implications of the activity (Risk Framing sub-stage).</li> <li>Build demands for the need for functional intuitions for early warning systems and risk monitoring to ensure risk levels do not go beyond acceptable societal set limits (early warning and monitoring sub-stage).</li> <li>Build demands for carrying out risk pre-screening as a prelude for objective risk assessment where the level of risk management is commensurate with the level of risk (Risk Pre-screening stage).</li> <li>Build demand for the need to adopt appropriate international standards for the selection of major assumptions, criteria, procedural rules and methodologies for assessing all risks and associated societal concerns.</li> </ul>
Supports, Withdrawals	<ul> <li>Build lobbies to counter influence of benefiters from unchecked rapid urban expansion and environmental degradation, particularly in the sectors of real-estate, construction, banking, insurance, etc.</li> <li>Build partnerships with relevant private-sector stakeholders from the above sectors to stress advantages of all sectors in reducing the main risk drivers</li> </ul>
Modes	<ul> <li>Develop country-specific guidelines, disseminated through workshops, for awareness raising of various stakeholders regarding demands in the pre-assessment stage taking into account specificities of hazards, exposures and vulnerabilities.</li> <li>Develop information sharing mechanisms and procedures to ensure a two way sharing of information.</li> </ul>
Gate- keeping	<ul> <li>Build lobbies to ensure that DRR ideas including major concepts such as the incorporation of DRR in the development and investment process, risk framing, risk monitoring, risk screening are not excluded by Gatekeepers.</li> <li>Build lobbies to ensure that up-to-date methodologies and procedural rules are adopted for the assessment of hazards, exposure, vulnerabilities and associated risks.</li> </ul>
Policy Framework and Decision Making	• Build lobbies to ensure that pro DRR view points are well-represented and is taken into account within the decision making policy framework.
Outputs	• Build lobbies to ensure that outputs correspond to expected deliverables through the use of time- specific performance measures which are easy to quantify.

**Table 3** Needs for Addressing Market Failures within the Political Economy Framework at the Risk Assessment Stage within the Risk Governance Framework

#### 3.3.2 Risk Assessment

Table 4 shows the needs for addressing market failures within the political economy framework, at the risk assessment stage within the risk governance framework.

Table 4 Needs for Addressing Market Failures within the Political Economy Framewor	·k, at
the Risk Assessment Stage within the Risk Governance Framework	

	Needs for Addressing Market Failures in Risk Assessment
Stage	
Influences, Demands, Oppositions	<ul> <li>Build demands for carrying out technical risk assessment in a scientific manner, according to international standards, including the assessment and regular updating of hazards, exposures, vulnerabilities and associated risks.</li> <li>Build demands to create the institutions capable of generating necessary information for the technical risk assessment and of carrying it out.</li> <li>Build awareness and demand for the need to carryout proportional technical risk assessment where the complexity of the assessment is commensurate with the level of the risk.</li> <li>Build demands for stressing importance of societal risk assessment in view of large uncertainty associated with earthquake, drought and climate change risks.</li> <li>Build demands for carrying out societal risk assessment, including stakeholders concerns and questions, emotions, hopes, fears and apprehensions regarding the risk and the likely economic, political, and social consequences</li> <li>Build demands to create the institutions capable of generating necessary information for the societal risk assessment and of carrying it out.</li> <li>Build awareness and demand for the need to carryout proportional societal risk assessment where the complexity of the assessment is commensurate with the level of the risk.</li> </ul>
Supports, Withdrawals	<ul> <li>Build lobbies to counter influence of benefiters from unchecked rapid urban expansion and environmental degradation, particularly in the sectors of real-estate, construction, banking, insurance, etc.</li> <li>Build partnerships with relevant private-sector stakeholders from the above sectors to stress advantages of all sectors in reducing the main risk drivers.</li> </ul>
Modes	• Develop information sharing mechanisms and procedures to ensure a two way sharing of information.
Gate-keeping	• Build lobbies to ensure that DRR ideas including major concepts such as the generation of information required for risk assessment, proportional risk assessment, and societal risk assessment are not excluded from the debate by gate keepers.
Policy Framework and Decision Making	Build lobbies to ensure that pro DRR view points are well-represented and is taken into account within the decision making policy framework.
Outputs	Build lobbies to ensure that outputs correspond to expected deliverables through the use     of time-specific performance measures which are easy to augntify.

#### 3.3.3 Risk Evaluation

Table 5 shows the needs for addressing market failures within the political economy framework, at the risk evaluation stage within the risk governance framework.

Table 5 Needs for Addressing Market Failures within the Political Economy Framework, and
the Risk Evaluation Stage within the Risk Governance Framework

	Needs for Addressing Market Failures in Risk Evaluation		
Stage			
Influences, Demands, Oppositions Supports,	<ul> <li>Build demands for a nationwide debate including all relevant stakeholders on the limits of tolerable and intolerable risks corresponding to various human and economic activities and hazards within the country.</li> <li>Build lobbies to counter influence of benefiters from unchecked rapid urban expansion and</li> </ul>		
Withdrawals	<ul> <li>environmental degradation, particularly in the sectors of real-estate, construction, banking, insurance, etc.</li> <li>Build partnerships with relevant private-sector stakeholders from the above sectors to stress advantages of all sectors in reducing the main risk drivers.</li> </ul>		
Modes	<ul> <li>Develop guidelines and regulations on cost-benefit analysis that stress the importance of:         <ul> <li>Selection of realistic discount rates without overestimation of the discount rate, based on recent studies which shows that when the discount rate is uncertain the expected present value of projects with standard net benefit flows is invariably greater than the present value calculated using the average of all possible discount rates [24]. This will avoid misinformed, flawed conclusions indicating no need to implement any of the DRR measures under consideration.</li> <li>Selection of a realistic period over which the benefit of any DRR measure will accrue. In this context, the selection of a short duration will lessen the calculated benefits.</li> <li>Identification for items to be included and accounted for in the calculation of the value of benefits, including lost income, interruption times and the value of lives saved, as is the case in the regulations adopted in some countries [25], for the application and enforcement of the European Union Control of Major Accident Hazard (COMAH) regulations [26].</li> <li>Accounting for societal aversion to multiple fatalities, by adopting a large cost-to-benefit ratio for dismissing a DRR measure at high-risk levels, which corresponds to high likelihood of incurring multiple fatalities. Unfortunately, in rentier states where societal concern risk assessments are rarely undertaken, this is seldom accounted for.</li> <li>Carrying out sensitivity analysis on the effect of various variables on the outcome of the cost benefit analysis.</li> </ul> </li> </ul>		
Gate-keeping	• Build lobbies to ensure that DRR ideas including major concepts such as tolerable, intolerable risks, societal aversion for multiple fatalities, value of a saved life, indirect benefits of disaster risk reduction measures, indirect losses arising from disasters are not excluded from the debate by gate keepers.		
Policy Framework and Decision Making	• Build lobbies to ensure that pro DRR view points are well-represented and is taken into account within the decision making policy framework.		
Outputs	Build lobbies to ensure that outputs correspond to expected deliverables through the use     of time-specific performance measures which are easy to quantify		



#### 3.3.4 Risk Management

Table 6 shows the needs for addressing market failures within the political economy framework, at the risk management stage within the risk governance framework.

**Table 6** Needs for Addressing Market Failures within the Political Economy Framework, at the Risk Management Stage within the Risk Governance Framework

	Needs for Addressing Market Failures in Risk Management
Stage	
Influences, Demands, Oppositions	<ul> <li>Raise awareness regarding need to account for disaster risk considerations in investment and development decisions.</li> <li>Raise awareness regarding need for a functioning regulatory framework based on up-to-date landuse planning and building codes for new construction and retrofitting existing construction, which is enforced in a strict manner.</li> <li>Raise awareness regarding the need for transparency, accountability and participation of various stakeholders regarding the selection of the risk management portfolio of prospective, corrective and compensatory risk management approaches.</li> </ul>
	<ul> <li>Raise awareness regarding need for transparency, accountability and participation regarding the selection of the risk financing portfolio of risk retainment, risk insurance and risk transfer to capital markets.</li> </ul>
Supports, Withdrawals	<ul> <li>Build lobbies to counteract potential effects of following stakeholders:</li> <li>International pressure from lenders for structural readjustment to curb public spending thereby reducing direct spending on DRR and indirectly increasing social, economic, and physical vulnerability to disaster risk.</li> <li>International and national pressure to retrench the role of the state in the development and management of employment policies with a direct impact on DRR employment policies which play a significant role in reducing vulnerabilities.</li> <li>Internal pressure from real estate magnates and captains of the construction industry to reduce government constraint in urban planning and landuse management policies.</li> <li>Internal pressure from logging, quary and factory owners to avoid / delay enforcement of environmental regulations to reverse environmental degradation.</li> <li>External and internal pressure to transfer responsibility to the private sector in building critical infrastructure projects including schools, hospitals, water and wastewater networks and transportation networks without the necessary capacities within the public sector to monitor risks and to ensure sufficient mechanisms are in place for enforcement of relevant risk management and safety codes.</li> <li>International and internal pressure to wholeheartedly adopt liberalisation leading to rapid increase in trade and capital flows with at times disproportionate emphasis on external driven development thereby reducing placed on, and resources allocated to, response activities (often supported to more emphasis being placed in many countries by the military or other affiliated agencies) at the expense of prevention and mitigation activities. This trend may be further compounded by lack of understanding of the salient and complex features involved in prevention policies including risk retainment and transfer strategies, levels of unacceptable and tolerable risk. In rentiner states this is even further compounded by the fact the role</li></ul>
Modes	<ul> <li>DRR policies and strategies are discussed in the policy framework power map, and are often rejected by not allocating adequate resources for implementation. Therefore, there is a need to direct efforts on how to effect DRR change through influencing decisions by the policy for mitself.</li> </ul>

		Needs for Addressing Market Failures in Risk Management
Stage		
Gate- keeping	•	Build lobbies to ensure that DRR ideas including major options for disaster risk reduction (prevention, mitigation, preparedness, response and recovery) with emphasis on inherent safety are not being excluded by gate keepers. Build lobbies to ensure that the risk management portfolio is not being biased by gatekeepers but instead includes prospective, corrective and compensatory risk management measures and strategies. Build lobbies to ensure that the financial risk management portfolio is not being biased by gatekeepers.
Policy Framework and Decision Making	•	Build lobbies to ensure that pro DRR view points are well-represented and is taken into account within the decision making policy framework.
Outputs	•	Build lobbies to ensure that outputs correspond to expected deliverables through the use of time- specific performance measures which are easy to quantify.

#### 3.3.5 Risk Communication

Table 7 shows the incentives for addressing market failures within the political economy framework, at the risk communication stage within the risk governance framework.

Stage	Needs for Addressing Market Failures in Risk Communication
Influences, Demands, Oppositions	<ul> <li>Build demands for safer buildings environment as expressed by citizens, albeit for a short time in the immediate aftermath of a disaster or building collapses.</li> <li>Build demands for sustainable livelihoods especially in rural areas as requested by vulnerable communities and encouraged by various UN agencies acting as external agents and national partners, NGOs and development-related agencies.</li> <li>Build demands for reduction in extensive and intensive disaster losses as demanded by UNISDR, international and regional institutions and other national and international NGOs.</li> <li>Build demands for capacity building and related employment policies in disaster risk management.</li> <li>Build demands for transparency, participation and accountability from civil society.</li> <li>Build demands for better accounting for DRR losses from international agencies and development related agencies.</li> <li>Raise demand for a more clear division between public and private sectors.</li> </ul>
Supports, Withdrawals	<ul> <li>Build lobbies to counter influence of benefiters from unchecked rapid urban expansion and environmental degradation, particularly in the sectors of real-estate, construction, banking, insurance, etc.</li> <li>Build partnerships with relevant private-sector stakeholders from the above sectors to stress advantages of all sectors in reducing the main risk drivers.</li> </ul>

**Table 7** Needs for Addressing Market Failures within the Political Economy Framework, atthe Risk Communication Stage within the Risk Governance Framework

	Needs for Addressing Market Failures in Risk Communication
Stage	
Modes	<ul> <li>Ensure the existence of an accountability framework based on a two-way communication approach.</li> <li>Build risk communication modes that can build tolerance for different view points on risk management, provide a basis for the resolution of risk management conflicts and build trust of the wider population in risk management decision and institutions.</li> </ul>
Gate-keeping	• Build lobbies to ensure that DRR ideas including information sharing, transparency and accountability of risk reduction decisions are not being excluded by gate keepers.
Policy Framework and Decision Making	• Build lobbies to ensure that pro DRR view points are well-represented and is taken into account within the decision making policy framework.
Outputs	• Build lobbies to ensure that outputs correspond to expected deliverables through the use of time-specific performance measures which are easy to quantify.

The needs and recommendations for effecting DRR change, as identified in this section are related to flaws and challenges within the political process itself, and as such cannot be implemented solely by governments. They can only be successful by employing a system-based approach that tries to lobby for support within all development spheres simultaneously, as discussed in the next section.

#### 3.4 Development of Systems-based Interventions to Effect DRR Change within the Political Economy Framework

This Section has merged the political economy analysis framework tool with the risk governance framework in order to identify the needs for addressing market failures at different stages within the risk governance framework. Based on the needs identified in Section 3.3, this section proposes a DRM intervention strategy which aims at effecting change within the decision making framework regarding DRR. This is a major difference from other proposed interventions which focus on capacity building for DRR and the development of DRR strategies and policies.

A specific combination of interventions is proposed aimed primary at building alliances to effect change within the DRR decision making process, as shown in Figure 7. It is envisaged that this may be effected by proposing interconnected activities for various stakeholders based on 1) risk monitoring tools for civil society, and alliance building for DRR 2) societal concern assessment by the scientific community, and alliance building for DRR 3) competitive programs for the business sector, stressing sustainability and reliance, and alliance building for DRR, and 4) participatory approach by local authorities for the assessment and reduction of disaster risk vulnerabilities. These interventions are selected to try to push forward and stress the advantages of building alliances to effect change in the DRR decision making process, based on their ability to:

- 1. Highlight within individual stakeholder spheres the advantages of incorporating transparency, participation and accountability into the DRR decision making process.
- 2. Highlight within individual stakeholder spheres the advantages of building alliances with other development spheres.



Figure 7 Proposed intervention to improve accountability

It should be noted that capacity building should take pace within all the spheres including local communities, since without building capacity of various stakeholders it remains elusive to build alliances and achieve effective participation, transparency and accountability in the DRR decision making process.

The paragraphs below propose possible contents, albeit in a succinct form, for the projects of the various stakeholders identified in Figure 7, some of which were highlighted by the international risk governance council [5] and by Gupta [7],

### Scientific Community

Research within centres and universities may be focused at collating and analyzing the societal concerns to various hazards, as elaborated in Table 3 through to Table 7. Issues to be addressed, include:

- The public's concerns and perceptions on hazards and risks, including those benefiting and those disadvantaged from risk generating activities.
- The expected social response to the rise in risk drivers and associated risks.
- An assessment of current practices on the scope of risk appraisal to determine whether it conforms to international state of the art practice and to what extent it addresses the decision making process related to DRR.
- Quantify societal aversion to multiple fatalities and assess to what extent it is taken into account in the decision making process.
- The role of existing institutions, government structures and the media in defining the public perception of risks and associated decision making process.
- Assess the extent to which risk managers are likely to be held accountable and/or face controversial responses arising from differences in the various stakeholder objectives and values, or from inequities in the distribution of benefits and risks, with special emphasis on their role in the decision making process.
- Assess the extent to which the various stakeholders are consulted in the selection of limits for intolerable, acceptable and negligible risks.
- Assess the extent to which societal concerns are taken into account when putting a value on lives saved, for use in costbenefit analysis.

- Assess the extent to which the information on national and local risk assessments, including societal concern risk assessment, is accessible by the public.
- Assess whether staff mandates include communicating societal and technical risk and early warning information to stakeholders and if yes to what extent such staff are capable of performing their task.
- Identify and/or develop effective processes for building lobbies with various stakeholders regarding the above issues, taking into account country specificities of hazards, vulnerabilities and exposures.

## <u>Civil Society</u>

Develop monitoring tools and apply these tools to assess the degree of availability of information on DRM, the ability of stakeholders to participate, the degree of participation and the accountability of decision makers, as per the needs identified in Table 3 through to Table 7. Unlike the self-assessment of progress in the Hyogo Framework for Action, this assessment should be carried out, and the results separately audited, by independent civil society organizations. Issues to be addressed include:

- The needs for the development of an accountability framework according to international norms and guidelines as part of the institutional framework for DRR.
- The extent to which the communication strategy is based on a two-way approach.
- The existence and effectiveness of mechanism for engaging the various stakeholders and collating and addressing their concerns.
- The extent to which the information on the decision making process regarding the allocation of dedicated resources to

implement disaster risk reduction plans and strategies at all administrative levels and sectors is accessible by the public?

- The extent to which the main stakeholders are involved in the decision making process.
- The effectiveness of attempts to empower all stakeholders to participate in the DRM decision making process.
- The effectiveness of attempts to categorize the risk problem based on dialogue with the various stakeholders.
- The effectiveness of attempts to categorize the risk in terms of the decision making context and to identify the associated stakeholders who must be involved in the decision making process.
- The effectiveness of attempts to reach a common understanding on magnitude of the risk, the risk management options and have all options been considered.
- The effectiveness of attempts to involve all stakeholders in the composition of risk financing portfolio between retaining the risk, insuring the risk and transferring to capital markets.
- The effectiveness of attempts to develop insurance policies that can target and reach the most vulnerable communities and households (e.g. through the development of microinsurance mechanisms).
- The effectiveness of attempts to involve all stakeholders in the composition of risk management portfolio and it's distribution between prospective, corrective and compensatory strategies.
- The effectiveness of attempts to develop risk prevention strategies which can target and reach the most vulnerable communities and households (e.g. through micro financing and saving schemes).
- The effectiveness of attempts to develop an open forum for decision making on DRR based on 1) availability and dissemination of national strategies and programs, 2) widely

advertised call for comments and feedback within a realistic time period, 3) use of variety of forms for dissemination and feedback collation including electronic media (e.g. email, social networks and websites).

- The extent to which all arguments been assessed as to their factuality.
- The extent to which the lobbyists are acting as gate keepers.
- Identify and/or develop effective processes for building lobbies with various stakeholders regarding the above issues, taking into account country specificities of hazards, vulnerabilities and exposures.

### Local Authorities

Develop pilot projects with local NGOs in order to reduce disaster risk vulnerability, based on a participatory approach as per the needs identified in Table 3 through to Table 7. Issues to be addressed include:

- Identify areas and communities most affected by extensive disaster risk losses.
- Develop indicators for measuring economic, social, institutional, physical and natural vulnerability to disaster risk.
- Carry out field surveys to assess levels of above vulnerabilities in identified areas.
- Develop strategies for intervention aimed at reducing vulnerability to disaster risk.
- Implement selected interventions.
- Develop and monitor progress in reducing vulnerabilities and increasing resilience.
- The extent to which any existing programs for the reduction of disaster risk drivers are successful.
- The extent to which the various components of disaster risk vulnerability including social, economic, physical, institutional

and natural vulnerabilities are regularly assessed and monitored.

- The extent to which such information is made available to the public in general and to concerned and affected populations in particular.
- The extent to which such assessments are carried out based on a participatory approach.
- The extent to which existing development and poverty alleviation programs recognize the importance of incorporating DRR into the development process.
- Identify and/or develop effective processes for building lobbies with various stakeholders regarding the above issues, taking into account country specificities of hazards, vulnerabilities and exposures.

### **Business Community**

Develop competitiveness programs for the private sector focusing on continuity of operations, sustainability, robustness and resilience, as discussed in Table 3 through to Table 7. Issues to be addressed include:

- Develop and refine sectoral plans for the businesses under consideration, stressing the importance of public and private sector resilience for business competitiveness.
- Develop individual business competiveness programs highlighting the importance of robustness and resilience.
- Develop private public partnerships for ensuring resilience involving all relevant stakeholders.
- The most effective process for building lobbies with various stakeholders regarding the above issues.
- Identify and develop effective processes for building lobbies with various stakeholders, taking into account country specificities of hazards, vulnerabilities and exposures.

### 3.5 Application to Selected Countries

The proposed systems-framework for intervention, as developed in Section 3.4, is being applied to selected countries in the MENA region to assess its validity. The effectiveness of the approach in monitoring efforts for effecting DRR change will be measured by focusing on participation and accountability regarding DRR decisions related to:

- Managing extensive flood risk.
- Managing intensive earthquake risk.
- Managing Intensive climate change risk.
- Building a portfolio of compensatory, corrective and prospective disaster risk management policies and strategies.
- Building a portfolio of financing risk management strategies based on risk retainment and reduction and risk insurance and risk transfer, which includes micro-finance and micro-insurance measures.

Lessons learnt will be widely disseminated so that any relevant recommendations can be fed into the post 2015 Hyogo Framework.

#### 4 Conclusions

#### 4.1.1 Specificities of Rentier States

- Rentier states and economies are not based on the provision of public goods, including prevention measures for DRR, but rather on patronage politics including compensation for disaster risk losses.
- The role, ability and mentality of citizens to hold the state accountable in its delivery of development and DRR public goods needs further scrutiny.
- Some of the different stages within the risk governance framework, particularly the 1) societal concern risk assessment,
  2) assessment of limits for tolerable and intolerable risks, 3) the risk management options and 4) risk communications strategies are not accounted for in DRR practices in rentier states.
- The production character of some autocratic states, as opposed to the allocation character of rentier states, may explain the perceived anomaly of the success of some DRR states in reducing disaster risk, including Cuba and Vietnam.

#### 4.1.2 Interaction between Rentier States and Intensive Risk

- While intensive earthquake risk is characterized by a degree of uncertainty which necessitates the involvement of affected populations in the disaster risk management decision making process, the fiduciary system of government within rentier states makes such a participatory approach difficult.
- Financial risk management strategies do not always balance between the proportion of risk retained, insured or transferred to capital markets. Furthermore this process is not carried out in a participatory and accountable manner in rentier states.
- Strategies for reducing intensive earthquake risk for new construction are diluted due to lack of sufficient enforcement and penalty mechanisms.

- Strategies for reducing intensive risk for existing construction do not address the high vulnerability to intensive disaster risk prevalent within illegal settlements and urban slums.
- Strategies for reducing intensive disaster risk, including earthquake, desertification and drought risks, are not based on the involvement of all relevant stakeholders including the affected populations.

### 4.1.3 Interaction between Rentier States and Extensive Risk

- Extensive risk strategies in rentier states do not allocate sufficient efforts for the prevention of extensive disaster risk, where the provision of prevention DRR measures may be considered as part of the public goods not provided by rentier states.
- Extensive disaster risk strategies in rentier states inevitably places more emphasis on the compensation and relief of affected segments of the population, where compensation DRR measures may be considered as part of the patronage politics and private goods provided by rentier states.
- Compensation is often limited to those eligible for such measures, thereby excluding the most vulnerable segments of the population residing in slums and illegal settlements.
- Awareness raising, capacity building and the communication strategy is based on a one way approach where the state provides certain information to citizens, and other stakeholders, related to behaviour during and before disasters. It is yet to develop into a two way approach where results of risk assessment, including societal concern risk assessment, risk drivers, and vulnerabilities are made available to the public and where the relevant stakeholders plays a part in the decision making process regarding risk management at the various levels and sectors.

In conclusion, when attempting to build accountability and political will for DRR, it becomes then possible to analyze the accountability and political will for DRR in terms of the specific directions, goals and outcomes of the political system that represent a particular coalition of interests that command power and capacity to influence DRR related decisions at each stage within the political process.

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