GLOBAL GOVERNANCE OF DISASTER RISK REDUCTION: AN INTRODUCTION TO A NEW ANALYTICAL FRAMEWORK

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Abstract:
Satu hal yang kerap luput dari bahasan pembelajaran Ilmu Hubungan Internasional adalah visi utama Ilmu Hubungan Internasional itu sendiri. Perkembangan Hubungan Internasional sebagai sebuah disiplin ilmu didesain untuk memahami dan mengurangi (jika memungkinkan mencegah) resiko yang muncul dari ancaman buatan manusia, yakni perang. Kini, Hubungan Internasional telah bertransformasi dalam berbagai bidang kajian dan kegunaannya dalam studi mengenai manajemen resiko bencana telah sangat nyata. Sentralitas resiko semacam ini tidak pernah hilang, justru semakin menguat seiring dengan dunia yang semakin terhubung satu dan yang lainnya, saling berkaitan dan juga rentan. Instabilitas di satu negara dapat mengakibatkan kekacauan bagi yang lain. Tidak jarang pula, lokalisas membantikkan resiko yang tak terselesaikan tanpa kerjasama internasional - karenanya aspek 'lintas-batas' (transboundary) akan menjadi vital dalam menghadapi berbagai persoalan ke depan. Tulisan ini menunjukkan contoh dari intervensi terhadap tsunami dan bencana alam lain yang menjadi sorotan dalam hubungan internasional. Seni untuk menyeimbangkan pemerintahan dan pengaturan global dan lokal menjadi solusi untuk mengurangi resiko.

Keywords: International Relations, governance, risks, disaster risk reduction

1. Introduction

One thing probably goes without notice by International Relation (IR) students is that risk is the central vision of International Relation. IR’s emergence as a discipline, believe it or not, was designed to understand and to mitigate (and if possible to prevent) the risks arises from the human made hazard that is war. Today, IR has been transformed into many fields of inquiries and its importance in the study of disaster risk management is very visible. Surprisingly, its centrality to risks has never been faded, in fact IR’s centrality to risks gets stronger as the world has become highly connected, interlinked and at the same time volatile. Instability of one country may create crisis propagation to the others. More often, locally created risk cannot be solved without international cooperation – therefore ‘transboundary’ features will be the face of risks in the future.

It is argued that the failure of elites to control international politics, academia and policy makers shared the notion on the need of a “coordinated set of inter-state relationships,
with the ultimate goal of preventing future war" and a stable international order. Fong further quoting others such as Hollis and Smith that IR had been devised to creating means to prevent wars from happening.

In the disaster management field, modern “international relations” (to be distinguished with IR as a discipline) emerged at its earliest possible in 18th especially post disaster management (humanitarian emergency and reconstruction) in the context of Lisbon tsunamigenic earthquake in 1755. Mentioning the Lisbon earthquake here is in particular relevant to the IR students because it is one example of how international order, especially the international trade order in Europe, changed dramatically where the fourth biggest economy of Europe during that time might had lost its importance.

This paper will neither discuss the theoretical-relational concept of disaster risk and IR nor post disaster intervention nor discuss the disaster diplomacy theory. Instead, this paper tries to answer two simple questions: what drives the countries to invest in disaster mitigation and early warning system? In particular, the paper is interested to know whether both local and global governance simultaneously play a role in the investment?

2. Disaster Mitigation and International Relation: Scientists as Delegation?

Earlier feature of International relations and ex-ante disaster management (such as disaster mitigation) was kind of internationally co-operative mood by scientists, such as the coming together to measure the size of the earth in 18th century. The deployments of scientists from Britain (more than 20 scientists), France (32 scientists) not including efforts form others such as Sweden, Germany, Russia, Italy to hundreds of areas in the countries such as Indonesia, Siberia, China and Africa during the second half of the century indicated the awareness of concerted action in understanding of the world. One funny story when a team of Britain’s scientists (Charles Mason and Jeremiah Dixon) during their mission in Bengkulu to observe the transit of Venus of 6 June 1761 were attacked by a French frigate which failed the mission.

The legacy of scientists’ led international relation can still be seen today. Intergovernmental Panel on Climate Change, is for example a “scientific led” panel bounded by political legitimacy on it. Far before that, almost fifty years ago, the field of disaster mitigation through the Intergovernmental Oceanographic Commission (IOC) is one example.
of international relation through the work of scientists and technocrats. Looking at the reports of IOC (www.ioi-tsunami.org), it is interesting to note that in many cases, legitimacy gained in the report is based on the scientists’ nationality. Every scientist is a delegation of their nationality.

It is somehow not fully mixed with the politics, even though after a closer look at the scientists’ led cooperation it may be more than what is seen by the eyes of lay people. Students who are familiar with the study of international politics of development aid, may have noticed that investment in the disaster early warning system (EWS) such as tsunami, is not shaped by the objective risks out there embedded in the physical world but indeed shaped by and embedded in the political economy interests of the countries (especially the developed world).

For instance, based on the Author personal experience and study, the Caribbean has been overlooked and left without significant investment in the tsunami warning system. While coming from the context of Indonesian research context of tsunami EWS, Indian Ocean has been flooded by international cooperation (science based, multilateral based and bilateral based cooperation). However, this claim needs further research on what drives the investment in tsunami EWS in each sea basin? Is it the stock of assets surrounding the basins?
that need to be protected (objective risks argument), or is it the legacy of fresher past disasters that drives the investment or is it the political economic motives that pushed countries to cooperate in TEWS?

3. International Regimes of Disaster Management Before Hyogo Declaration

In the field of Global Environmental Change, there are abundant debates and discussions on global environmental governance and its links with global environmental politics. Rechkmerneter⁶ presents the emergence of global environmental governance supported by a comprehensive list of 243 titles of multilateral environmental agreements from 1933 to 2005 plus 19 lists of UN Resolutions and Agreements from 1972-2005. Rechkmerneter highlights features of global governance as firstly, a systematic approach. Secondly, rather phenomenological basis but the last is the role of international organisations, particularly the organs, programmes and agencies of the UN system, and also the system of world conferences that played significant roles as both platforms and mediators.⁷

In the field of disaster risk management studies, Rodger Doran⁸ gave a positive response to Ian Burton’s ideas of the necessity of an intergovernmental panel on disaster risk management⁹ by agreeing on the need of a programmatic umbrella of an Intergovernmental Panel which focuses on Hazards and addresses issues by promoting a risk management approach (combining vulnerability reduction, hazard mitigation/prevention and emergency preparedness) mandated for “consolidating scientific, technical and humanitarian knowledge, and promoting research into the gaps in our knowledge.”¹⁰ The paraphrasing is that an international panel focuses on pre disaster risks instead of effects (or post disaster risk management) was needed. The failure of International Decade for Natural Disaster Reduction had triggered the call for thicker efforts to promote disaster reduction.¹¹ Burton agreed with Wisner ¹² notion of a need to create an effective international regime to work collectively for the prevention of natural disasters.

Since the beginning of 2¹st century, International Federation of Red Cross (IFRC) has been extensively calling for an international disaster response law. One might have already had a preconception that IFRC heavily sided on reactive humanitarian emergency focus. It was probably correct in the past but following the annual World Disaster Report series since 2000 until 2007,¹³ there is indeed a big paradigm shifts to promote International Disaster Response Law (IDRL). Apparently, IDRL convey the message of states’ openness following post disaster response [see IFRC 2000, chapter 8; IFRC 2007:20]. One might criticise that
IDRL is more to reactive emergency response orientation. But the criticism misses the point that an international emergency response can positively challenge the business as usual, act as starting point to transform the disaster management practices, bringing new knowledge and expertise and new opportunities of learning, political transformation for conducive peace process, reconstructions that integrate risk reduction measures. To what extend IDRL will contribute to global disaster risk governance, is subject to further scrutiny.

Today, International Strategy for Disaster Reduction has emerged as a new regime for governing disaster risk reduction at global scale. This is the short journey to the fact where disaster risk governance as a concept emerges during the second half of the first decade of

**Table 1. Examples of International Institutions Governing Disaster Risks**

<table>
<thead>
<tr>
<th>Example of Multilateral Cooperation on Disaster Risk Related</th>
<th>Examples and Remarks</th>
</tr>
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<tbody>
<tr>
<td>Climate Change Adaptation Regimes</td>
<td>UNFCCC, Kyoto Protocol, Post Kyoto dealing with climate risks</td>
</tr>
<tr>
<td>Milenium Development Goals (MDGs)</td>
<td>Development and disaster interface</td>
</tr>
<tr>
<td>World Conference on Natural Disaster Reduction,</td>
<td>Yokohama 1994; Kobe 2005</td>
</tr>
<tr>
<td>International Strategy for Disaster Reduction (UN-ISDR)</td>
<td>ISDR System of Disaster Reduction</td>
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<td>Hyogo Framework for Action 2005</td>
<td>Hyogo Declaration</td>
</tr>
<tr>
<td>Guidelines, standards (Sphere standard, Humanitarian Charters)</td>
<td>Voluntary standards set by global actors</td>
</tr>
<tr>
<td>International Humanitarian Law</td>
<td>Law of War – based on principle of unavoidable war</td>
</tr>
<tr>
<td>International Human Rights Law</td>
<td>Based on the logic of avoidable violence including violence rooted in natural disasters</td>
</tr>
<tr>
<td>International Code Council – International Building Codes</td>
<td>Set by global non-state actors</td>
</tr>
<tr>
<td>International Decade for Natural Disaster Reduction (IDNDR), 1990-2000</td>
<td>Set by the United Nations System</td>
</tr>
<tr>
<td>ISO 13000 on Risk Management</td>
<td>Set by Private international standard organisation</td>
</tr>
<tr>
<td>Global Facility for Disaster Reduction and Recovery</td>
<td>World Bank's bold initiatives</td>
</tr>
<tr>
<td>Insurance and Reinsurances</td>
<td>Private sectors – insurance industry</td>
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21st century as noted in the United Nations’ Global Review of Disaster Risk Reduction in 2007 as it mentions that “In view of the increasing political momentum, measures have been designed to build on existing mechanism to strengthen the ISDR as a system of partnerships composed of Governments, the United Nations System, intergovernmental and non governmental organisations (NGOs), international financial institutions, scientific and technical bodies, civil society and the private sector, to implement Hyogo Framework.” 14

The launch of Global Facility for Disaster Reduction and Recovery (GFDRR) by the World Bank is another indication of new form of governing disaster risks. Table 1 presents examples of the international institutions governing disaster risk reduction ranging from initiatives set by private sectors, non-governmental organizations (case of Sphere Standard and international building codes); insurance, and a great deal of multilateral organizations’ initiatives. Table 1 is indeed far from comprehensive but it can potentially serve drivers of global governance on disaster risk reduction.

4. Hyogo Framework for Action: A Global and Local Driver for Disaster Reduction?

Solving disaster risks through international cooperation especially multilateral settings have been seen by the practitioners as the most effective solution. One of the confidence has been confirmed by the evidence that the International Decade for Natural Disaster Reduction (IDNDRD) 1990–1999 which served as an international non legally binding institution had been considerable “success” in facilitating the setups of 130 national level disaster management committees/local points 15.

Today, the Hyogo Framework for Action (HFA) for disaster risk reduction which ratified by 168 member states in 2005, is expected to play similar roles as IDNDRD nevertheless with broader and deeper ambition to bring changes in status quo in disaster risks reduction implementation in the countries. The HFA is therefore considered as a “soft institution” which devising each member state to set five core agendas of disaster reduction. At the very heart of it is the institutional commitment in governance and institutions for disaster risk reduction which is to “Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.” The second priority is “to identify, assess and monitor disaster risks and enhance early warning systems;” The next ones are: Use knowledge, innovation and education to build a culture of safety and resilience at all levels; Reduce the underlying risk factors, and lastly strengthen disaster preparedness for effective response at all levels.
This paper shares some of the evidence based on the global dataset of institutional commitment to disaster risk reduction at country level, derived manually from 63 country self-assessment reports on HFA progress of implementation 2008-2009 as available at [www.preventionweb.net/english/hyogo/progress/reports/](http://www.preventionweb.net/english/hyogo/progress/reports/).

Each member state ranks their level of institutional progress on disaster risk reduction. The original ranking of HFA Progress of implementation consists of 1-5 level. Scale 5 is the judgment that there already a comprehensive institutional achievement, with the commitment and capacities to sustain efforts at all levels. Level 4 reflects substantial achievement, but with some recognised deficiencies in commitment, financial resources or operational capacities. Level 3 denotes some institutional commitment and capacities to achieving DRR but progress is not substantial. Level 2 reflects that achievements have been made but are relatively small or incomplete, and while improvements are planned, the commitment and capacities are limited. Lastly, Level 1 means achievements are minor and there are few signs of planning or forward action to improve the situation.

Four indicators (e-government services, rule of law, government effectiveness and press freedom) were selected from World Governance Indicators (freely available from [www.govindicators.org](http://www.govindicators.org)). This research uses only 63 selected countries from 2007/2008 data - the same size of the countries which voluntarily prepared their subjective measurement in the standardised format of HFA progress report sent to the United Nations International Strategy for Disaster Reduction (UNISDR) in 2009.

**Table 2. Correlation Tests of EWS Variable VS selected variables**

<table>
<thead>
<tr>
<th></th>
<th>DRR Regulation</th>
<th>Rule of Law</th>
<th>Government Effectiveness</th>
<th>Press Freedom</th>
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<tbody>
<tr>
<td><strong>Effective EWS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.440**</td>
<td>.408**</td>
<td>.493**</td>
<td>.263*</td>
</tr>
<tr>
<td>Significant (2-tailed)</td>
<td>.000</td>
<td>.001</td>
<td>.000</td>
<td>.038</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>63</td>
</tr>
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</table>

**. Correlation significant at 0.01 (2-tailed). * . Correlation is significant at 0.05 (2-tailed)**
At the conceptual and hypothetical level, it is very clear that the prevailing institutional and governance quality play a great deal in disaster reduction policy and implementation. Disaster reduction policy is one out of hundreds/thousands policy produced by countries. Therefore, the regulatory context, rule of law and government effectiveness are legitimate factors which influence the making/unmaking as well as the enforcement/lack of enforcement or action/inaction in reduction of disaster risks. This is acknowledged as “Institutional vulnerability” context and process where formal institutions (regulation, rule of laws, constitutions, codes, bureaucracy, mandated organisations etc.) and informal institutions (culture, norms, traditions, religion) are either too weak to provide protections against disaster risks or being ignorant of their duty to provide safety and human security. In this paper, the prevailing governance indicators such as rule of law, government effectiveness, and press freedom as demonstrated in Table 2 are assumed to be the endogenous variables for implementing drivers for DRR. Therefore, still at the hypothetical concept, international intervention through either multilateral such as HFA or bilateral cooperation will not be succeed should the prevailing governance indicators failed to be reckoned and considered in the planning.

Table 2 suggests that there is a very strong correlation between EWS and DRR regulatory quality (i.e. HFA Priority 1) with prevailing regulatory quality (R=0.44, at 0.0.1 significant). Rule of law, government effectiveness, press freedom as demonstrated in Table 2, show very high positive correlation which should not happen by chance. There is strong association between overall selected governance and institutional quality indicators with disaster reduction policy. Since there are also regression lines in the scatter plots graphs as seen in Figure 1, one can be sure that the countries’ regulatory quality shapes the DRR implementation indicated by an effective EWS.

In a previous analysis Iran and Kazakhstan for instance, claim to have high degree of DRR regulatory quality but their prevailing regulatory quality is proved too be very low (below scale 2 out 10). This means that they have a rather high self claim in implementing DRR while its endogenous drivers to implement disaster management related policy is considerably very low. Or there is possibility that formally the countries do have good policy on papers but actual implementation is suspected to be very low, however, this is subject to further investigation. OECD countries have high governance and institutional performance but such a quality do not linearly translated to advanced investment in DRR regulatory quality (see for instance Norway, Italy and Turkey).
In a different Pearson correlation analysis (2-tail), the investment in Risk Assessment, Information and EWS (see Figure 2 below) is tested against DRR regulatory quality (HFA priority 1) and “governance effectiveness” indicator. The results is not surprising as the former has very high association R = 0.68 (N =63, significant at 0.01) while the latter is also very high with R = 0.627 (N = 63 at level confident 0.01). From the two regression models from the Figure 2, it can be concluded that Risk Assessment, Risk Information and (EWS) are determined by the existence of both DRR regulation (even though the former can be in existence before the later) and its implementation clearly depends on government effectiveness.

5. Final Discussion: Institutional Vulnerability Assessment is Needed

Overall, it has been foretold that in average, the OECD and high income countries enjoy better governance and institutional quality with better DRR regulatory level. This paper disagrees with the notion that “it is the wealth of the countries that influence the quality of DRR regulatory quality.” On the contrary, it argues that it is not enough with the status quo vulnerability assessment frameworks which tend to measure the outcomes of institutional vulnerability such as social vulnerability (by using health, education, human development index), physical vulnerability (quality of buildings and infrastructure), and economic

Figure 2: Composite Indicators Risk Assessment, Risk Information and Early Warning System (EWS) vs. DRR Regulatory Quality (left) and Government Effectiveness (right).
vulnerability (incomes, economic production) and environmental vulnerability (land degradation, environmental quality indicators); vulnerability assessors often ended up measuring the outcomes of institutions. In fact, it is not the wealth nor social-economic-environmental capacity that make disaster risk reduction possible but it is the institutions that either shape development outputs (such as incomes, employment, spatial distribution of people and goods), development outcomes (human poverty and human development, better health and education) or utilize these outcomes to reduce vulnerability. There are technical difficulties on how to measure how the material/immaterial goods and infrastructures help the human agents to reduce vulnerabilities. Money cannot buy a good system and quality of institutions.

Furthermore, the prevailing vulnerability assessment framework at the global scales (and even at local scale) are not able to measure how far the institutions in all the countries are going to reduce risks. The central hypothesis of this work is that the countries with better and stronger institutions tend to have more resources which later translated into more productive and better disaster risk governance. Consequently, they tend to have better system with more effective disaster mitigation, early-warning systems and disaster preparedness and response systems.

Having a global picture on the institutional context is very beneficial when it comes to the real world international cooperation. The prevailing approach of international cooperation for the developing world in the form of disaster reduction especially the early warning system (including mitigation) have been so far led by technocratic paradigm (i.e. international relation by technocrats) which undermine the roles of institutions and governance variables. The conclusion is clear that investment in the institutions and governance is also a pressing need, however, further investigation is need as this paper only presents a very brief research results and far from comprehensive thus subject to future improvement.

6. End Notes

1 Some analytical framework of this paper is adopted from Lassa, Jonatan (Forthcoming) Institutional Vulnerability Assessment and the Governance of Disaster Risk Reduction: Macro and Meso Scale Analysis. Draft PhD Thesis, University of Bonn.

Oxford, University of Oxford Press.
6 Rehmkemmer, Andreas (2005) “Global Governance and UN Reform: Challenges and Opportunities for Environment and Human Security.” InterSecTions No. 3.
7 Ibid.
11 Ibid., p. 140.
16 Government Effectiveness measures the quality of public services, bureaucracy and the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies; Rule of Law measures the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence; Source, World Governance Indicators