



Concept Note

Mencari Dasar Bukti yang Lebih Kuat untuk Penanggulangan Bencana: Pengkajian Risiko di Indonesia *In Search of Stronger Evidence-Based Disaster Management: Community-Level Risk Assessment in Indonesia*

YOGYAKARTA, 6 Agustus 2012 | Badan Nasional Penanggulangan Bencana (BNPB) mencatat pada tahun 2011 saja terjadi hampir 1,600 kejadian bencana alam di Indonesia yang mengakibatkan lebih dari 800 orang meninggal atau hilang, lebih dari 300,000 orang mengungsi, 15.000 unit rumah rusak berat, 3.300 rusak sedang dan hampir 42,000 rusak ringan.

Dalam kurun 2002 – 2011 hampir 90 persen bencana adalah hidrometeorologi seperti banjir, banjir bandang, kekeringan, tanah longsor, puting beliung dan gelombang pasang dan sisanya adalah geologis dan tektonis.¹

Di sisi penanggulangan bencana (PB) menjadi salah satu prioritas di Indonesia seperti terlihat pada peningkatan alokasi anggaran PB mencapai lebih dari Rp12 Triliun, yang mana Rp 4,5 Triliun ada di BNPB dan sisanya ada di kementerian dan lembaga, seperti Kementerian Dalam Negeri, Kementerian Kesehatan, Kementerian Sosial dan lain-lain.²

Dengan konteks itu pemerintah dan para pemangku kepentingan perlu membangun berbagai pengkajian risiko bencana yang berbasis bukti untuk meningkatkan volume dan mutu kinerja, serta memastikan efektivitas penanggulangan bencana.

Dalam kaitan penguatan perangkat pengkajian bencana yang berdasarkan bukti itu, *Pujiono Centre for Disaster and Climate Change Risk Reduction Studies* (*Pujiono Centre*), bekerja sama dengan Pusat Studi Manajemen Bencana (PSMB) UPN Veteran Yogyakarta dan Pusat Sejarah dan Etika Politik (PUSdEP) Universitas Sanata Dharma Yogyakarta menyelenggarakan suatu seminar yang berjudul “*Inventory of Disaster and Climate Change Risk Assessment*” pada tanggal 6

YOGYAKARTA, 7 August 2012 | The National Agency for Disaster Management (BNPB) recorded that in 2011 alone nearly 1,600 natural disaster events occurred in Indonesia inflicting 800 persons dead or missing, more than 300,000 displaced, 15,000 housing units heavily damaged, 3,300 moderately damaged and nearly 42,000 lightly damaged.

Between 2002 and 2011 approximately 90 percent of natural disasters were hydro-meteorological disasters such as floods, flash floods, drought, rain-induced landslides, strong winds and tidal waves, while the remaining were geological and tectonic disasters.¹

Indonesia has made disaster management one of its national development priorities and it allocates the national budget of more than Rp 12 Trillion (USD 1.26 Bn) of which around 30% is managed by BNPB and the remaining by the other ministries and agencies like Ministry of Home Affairs, Ministry of Health, Ministry of Social Affairs and relevant other institutions.² And thus the pressing need to develop sound and credible disaster risk assessments mechanisms that are based more on evidence to guide and enhance the performance effectiveness of the disaster management programme and activities.

Against that background, the **Pujiono Centre for Disaster and Climate Change Risk Reduction Studies**, in cooperation with Centre for Disaster Management Study (PSMB) of UPN Veteran University Yogyakarta and Centre for the Study of History and Political Ethics (PUSdEP) of Sanata Dharma University Yogyakarta conducted a seminar entitled “**Inventory of Disaster and Climate Change Risk Assessment**” on 6 August 2012, in Graduate Program of Sanata Dharma University,



Puji Pujiono

Agustus 2012, di Gedung Pasca Sarjana Universitas Sanata Dharma, Yogyakarta. Kegiatan ini dihadiri 60 orang dari unsur pejabat pemerintah, organisasi internasional, lembaga PBB, lembaga non pemerintah di tingkat nasional dan lokal serta lembaga basis di tingkat masyarakat dari daerah rawan bencana.

Dalam pengantarnya, Dr. Puji Pujiono menyebutkan, “Kelemahan kapasitas pengkajian risiko bencana membuat dasar kegiatan penanggulangan bencana menjadi *slippery*, they either have the tendency for being arbitrary at best or project-driven at worst”. Tambahan lagi, proses pengkajian risiko yang didominasi oleh parameter keilmuan dan berorientasi makro menimbulkan adanya keterputusan dan kesenjangan antara masyarakat yang hidup dengan risiko bencana di satu sisi dan pelaku serta proses analisis risiko bencana pada sisi lainnya. Akibatnya adalah bahwa upaya-upaya penanggulangan bencana itu tidak menjawab persoalan-persoalan yang ada di masyarakat yang hidup dengan risiko bencana itu. Pujiono mengakhiri pengantarnya dengan pertanyaan “Bagaimana memperkuat basis bukti untuk analisis risiko dan bagaimana menyambungkan kesenjangan ini?”

Sementara rejim analisis risiko bencana berbasis ilmu pengetahuan terus dikembangkan, para pelaku PB menggunakan apa saja yang telah dipunyai dan terus berinovasi. Dengan banyaknya ragam analisis risiko bencana maka pada saat ini diperlukan suatu inventarisasi dari berbagai pendekatan dan metoda analisis risiko dan menatanya menjadi suatu *landscape*. Dengan demikian berangsur-angsur dikembangkan menjadi suatu norma praktik yang mapan dan saling melengkapi.

Seminar ini memetakan berbagai praktik dan program analisis risiko bencana pada berbagai fase penanggulangan bencana yaitu pada saat tidak ada bencana, pada saat tanggap darurat, pasca bencana, dan setelah berlalunya masa bencana dan dalam proses pembangunan kembali. Fokus dari pembahasan adalah

Yogyakarta. The seminar was attended by more than 60 participants from the government, international organizations, UN Agencies, national and local non-governmental organizations, and community-based organizations from hazard-prone areas.

In his introduction, Dr. Puji Pujiono indicated that “Weaknesses in disaster risk assessments perpetuate shaky foundations for the disaster management. Risk reduction programmes and activities either tend to be arbitrary at best or being project-driven at worst”. In addition, disaster risk assessments have mostly been dominated by scientific parameters and have a macro orientation. This creates gaps between communities that live with risks at one side and disaster actors and their risk analysis processes at the opposite side. As a result, disaster management efforts often are off mark in addressing the actual problems faced by communities living in hazard-prone areas. Pujiono concluded his introduction with a question: “How could we enhance the evidence basis for risk assessment and how could we fill-in these gaps to propel more credible risk reduction programme and activities?”

While the science-based disaster risk analysis regime continues to be developed, disaster management actors utilize whatever assessment techniques and instruments in their disposals and keep on innovating processes and tools. Amidst the many diverse risk assessment processes, there need an inventory of all risk assessment approaches and methods to systematize the landscape of risk assessment. Such inventory constitutes the first step to developing established risk assessment norms, standards and practices.

The Seminar mapped out the different risk assessment practices and programs at all disaster phases: in pre-disaster situation, during emergency response, in the post-disaster rehabilitation and reconstruction period as well as far after the recovery timeframe has been completed. Discussions in the seminar were focused on how communities take part in risk assessment processes, how this process interact with the macro risk assessments that are technology-heavy, and how they contribute to the disaster risk reduction planning and implementation after the assessments.

Following a brief introduction on the Landscape of Risk Assessment by Dr. Puji Pujiono, the Seminar went on presenting the following topics:

1. **District level Development of Flood Risk Map**, Arif Rianto, ST, M.Si. of PSMB UPN Veteran. The session discussed the development of hazard, vulnerability and capacity database with their validation with the communities that will then be projected into GIS platform. The combination of community-based information and the use of technology may enhance disaster management at the local level.
2. **Village level Self Risk Assessment at Volcanic Eruption Setting**, Puji Setiarso of Jangkar Kelud. The session talked about the activities of community-based disaster response teams in 36 villages at the highest risk areas of Kelud Volcano in East Java Province that address disaster risks as well as



Panelists from the government, academics, civil society and international non-government organizations.

bagaimana masyarakat terlibat dan dilibatkan dalam proses analisis risiko, berinteraksi dengan teknologi dan analisis makro, dan dengan sendirinya atau berkontribusi pada penyusunan rencana aksi penanggulangan bencana termasuk penggerakan sumberdaya dan dana serta upaya penanggulangan bencana.

Presentasi dalam seminar ini adalah sebagai berikut:

1. Pengantar *The Landscape of Risk Assessment* oleh Dr. Puji Pujiono (Pujiono Centre).
2. Penyusunan Peta Risiko Bencana Banjir Kabupaten oleh Arif Rianto, ST, Msi. (PSMB UPN Veteran). Pengembangan basis data ancaman, kerentanan dan kesenjangan kapasitas beserta proses validasi dengan masyarakat yang diproyeksikan dengan platform GIS. Penggabungan antara informasi berbasis masyarakat dan penggunaan teknologi pada tingkat kabupaten memungkinkan pengembangan program penanggulangan bencana.
3. Masyarakat Mengkaji Risiko Bencana Gunung Api oleh Puji Setiarso (Jangkar Kelud). Kegiatan oleh kelompok-kelompok siaga masyarakat lintas desa di kawasan rawan bencana Gunung Kelud yang secara integral membahas risiko bencana dan menggerakkan warga untuk melakukan tindakan-tindakan pengurangan risiko dan kesiapan tanggapan.
4. Kajian Risiko Bencana Komunitas oleh Ruhui Eka S (Perkumpulan Lingkar). Penerapan pendekatan partisipatoris untuk menganalisis dan memvalidasi risiko pada tataran akar rumput dan kaitannya dalam perubahan rencana pembangunan jangka menengah tingkat desa.
5. *Household Economy Analysis* oleh Puspasari Indra (Oxfam). Penggunaan piranti analisis matapencaharian pada tataran rumah tangga untuk mobilize people to reduce their own risks and increase preparedness.
3. **Community-based Disaster Risk Assessment**, Ruhui Eka S. of Lingkar Association. The session discussed the implementation of participatory risk assessment at the grassroots level and its linkage to village middle-term development planning.
4. **Household Economy Analysis**, Puspasari Indra of Oxfam. The session talked about the use of livelihoods analysis at the household level to develop baseline data on the level of vulnerability to various different disaster risk and shock scenarios.
5. **Knowledge Contestation Against Risk Reduction: Memory and Cultural Approach** in understanding people's resistance to Jesuit Refugee Service (JRS) Indonesia DRR Programme in Kluet, South Aceh, Dedy Kristanto and Saefudin Amsa (PUSDEP Sanata Dharma University). The session discussed issues related to community's perception and contestation to post-tsunami DRR programs within the perspective of chronic social conflict with its complex social, cultural and religious background.
6. **Indigenous Risk Assessment leading to Adaptation and Mitigation Strategies** of Sikep Samin Community to the Effects of Global Warming Adaptation to Paddy farming, Dr. Eko Teguh Paripurno of PSMB UPN Veteran. Indigenous community practices in responding to the impacts of climate change and disaster on paddy farming that reflect local wisdom. The communities uncomplicated logic that puts the blame of climate change effect to rice farming to the human behavior, and the need to instigate adaptive farming practices.
7. **Climate Change Impact Studies and Programme of UNDP Indonesia**, Anton Sri P. of UNDP. UNDP supported climate change risk programming and



membangun *baseline* tingkat kerentanan terhadap berbagai skenario risiko bencana.

6. Konfrontasi (Pengetahuan): PRB Vs *Local Wisdom* Pendekatan Ingatan dan Kultural dalam Studi Kasus Pelaksanaan Program PRB di Kluet, Aceh Selatan oleh *Jesuit Refugee Service (JRS) Indonesia* oleh Dedy Kristanto & Saefudin Amsa (Pusdep Universitas Sanata Dharma). Persepsi masyarakat dan kontestasi terhadap program pengurangan risiko bencana pasca tsunami dalam kaitannya dengan konteks konflik kronis dan latar belakang kompleksitas sosial, budaya, dan keagamaan.
7. Kajian Dampak, Adaptasi dan Mitigasi Pemanasan Global pada Pertanian Padi Komunitas Sikep Samin – Pati oleh Dr. Eko Teguh P (PSMB UPN Veteran). Praktik *indigenous* masyarakat dalam menanggapi akibat perubahan iklim dan risiko bencana pada sektor tanaman padi yang merefleksikan kearifan lokal.
8. *Climate Change Impacts Studies & Programme of UNDP CO Indonesia* oleh Anton Sri P (UNDP). Analisis risiko terhadap perubahan iklim dan penerapan pilot project adaptasi tingkat masyarakat dalam rangka manajemen risiko perubahan iklim di Indonesia. Kesamaan karakteristik akibat perubahan iklim dengan ancaman bencana dan integrasi antara adaptasi perubahan iklim dan pengurangan risiko bencana hidrometeorologi.
9. Program Pengkajian Risiko Bencana Nasional oleh Lilik Kurniawan (BNPb). Pengembangan peta risiko pada tataran propinsi sebagai bagian dari program pengkajian risiko nasional. Pada kesempatan berikutnya akan dikembangkan analisis risiko pada tataran kabupaten dan desa.
10. *Joint Needs Assessment for the first 48 Hours: Tool for Emergency Food Security and Livelihood* oleh Puspasari Indra (Oxfam). Contoh pada salah satu sektor dalam rangka *rapid assessment* untuk mendapatkan *situational definition* dalam konteks hari-hari pertama setelah kejadian bencana emergensi.
8. **National Disaster Risk Assessment Program of the national DM Agency**, Lilik Kurniawan of BNPb. The development of provincial risk maps in all the provinces. Later the government would develop risk analysis at the district and village levels.
9. **Joint Needs Assessment (JNA): Assessing the risk in the first 48 Hours of Disaster Emergency**. Puspasari Indra from Oxfam. Tool for assessing the risk of Food Security and Livelihood as part of initial disaster rapid assessment to develop situational definition in the first days of disaster.
10. **Multi-Cluster Initial Rapid Assessment (MIRA)**, by Titi Moektijasih from UN-OCHA. The multi-cluster approach helped emergency responders obtain depiction of the emerging needs of disaster-affected communities in the first weeks of emergency response. The results from this assessment were used to formulate and implement humanitarian operations and mobilize resources in a coordinated manner.
11. **Damage and Loss Assessment (DALA)**, Magda Adriani of the World Bank. The instrument was used to assess disaster situation in the first weeks of the emergency to analyze the damage and loss to the economy and infrastructure and determine the arising needs for recovery.
12. **Human Recovery Needs Assessment**. Rinto Andriano Pujiono Centre. The instrument assesses the risks of household and communities in post disaster setting. It addresses the damage, loss and disruption to community's functions, and the conversion of the people's needs into funding resource requirements as part of the recovery plan. The component, which in Indonesia was developed by BNPb in collaboration with UNDP, combined into integrated Post-Disaster Need Assessment (PDNA).
13. **Longitudinal Study of Post-Merapi Eruption Recovery Process**. Juli Nugroho of Yogyakarta DRR Forum. The assessment examines the progression of

11. *Multi-Cluster Initial Rapid Assessment (MIRA)* oleh Titi Moektijasih (UNOCHA). Pendekatan multikluster untuk mendapatkan gambaran kebutuhan pada minggu-minggu pertama setelah kejadian bencana emergensi. Hasilnya digunakan untuk menyusun dan menyelenggarakan operasi kemanusiaan dan memobilisasi sumberdaya secara terkoordinasi.
12. *Penilaian Kerusakan dan Kerugian Pasca Bencana / DALA* oleh Magda Adriani (Bank Dunia). Penilaian situasi pasca bencana pada bulan-bulan pertama berdasarkan sistem penganggaran pemerintah untuk menentukan penilaian secara makro kerusakan dan kerugian serta kebutuhan akan sumberdaya untuk pemulihan yang memadukan pengurangan risiko bencana.
13. *Pengkajian Kebutuhan Pascabencana: Human Recovery Needs Assessment Component* oleh Rinto Andriano (*Pujiono Centre*, UNDP). Pengembangan penilaian kerusakan, kerugian dan gangguan fungsi-fungsi kemasyarakatan serta konversi kebutuhan masyarakat menjadi keperluan sumberdaya pendanaan untuk mengembangkan rencana aksi pemulihan. Komponen yang dikembangkan oleh BNPD dan UNDP di Indonesia ini bersama sama dengan DALA menjadi suatu kesatuan PDNA.
14. *Longitudinal Study of recovery process of Merapi volcanic eruption* oleh Juli Nugroho (Tim LS, Forum PRB Provinsi DIY). Proses penilaian karakteristik risiko bencana pada konteks pemulihan jangka panjang setelah program pemulihan pasca bencana. Metodologi ini menggunakan *baseline* sejak sebelum kejadian bencana, pada saat, sesudah, dan lama proses pemulihan berlalu.

Beberapa pembahasan pada seminar ini diilustrasikan sebagai berikut:

Komunitas di 36 desa di lereng Gunung Kelud yang menempati 10 kecamatan di 3 kabupaten (Malang, Blitar, Kediri) tergabung dalam organisasi “Jangkar Kelud” mempunyai perspektif tersendiri mengenai kajian risiko bencana. Puji Setiarso mengatakan: “Pengkajian risiko kampung merupakan tanggung jawab warga yang ada di kawasan rawan bencana. Untuk itu kami membentuk tim siaga desa yang anggotanya belajar dan tahu tentang pemetaan dan risiko bencana. Dengan demikian masyarakat sendiri memahami ancaman, menyadari kondisi dan risiko yang bisa terjadi, serta tergerak untuk mengurangi risiko.”

Para pegiat Jangkar Kelud menerapkan cara-cara yang akrab dengan warga kampung untuk menggali dan menggambarkan karakteristik ancaman dan kerentanan kampung, dan membahas kesenjangan kapasitas pemerintah desa dan warganya. Proses pembelajaran itu sendiri menjadi proses penyebaran ‘kesadaran’ kepada para warga yang lain, dan mendorong penerapan upaya-upaya pengurangan risiko dan kesiapan tanggap darurat dalam kehidupan sehari-hari. Hasilnya adalah kesadaran tentang kebutuhan untuk meningkatkan kemampuan, dan menyebarkan hasil belajar dan ilmu kepada anggota warga yang lain.

recovery in the longer-term. The methodology started with the development of baseline data from before the disaster, during the emergency response and after the disaster.

The followings are some highlight of the discussions in the seminar:

Communities in 36 villages in the vicinity of Kelud Volcano that resided in 10 sub-districts in the District of Malang, Blitar, and Kediri joined in a network named “Jangkar Kelud”. The organization developed an independent perspective on disaster risk mapping. Puji Setiarso, one of the activists of the network maintained that, “Community members have to be responsible for the risks they are facing. For that reason, we set-up village disaster response teams that are tasked with learning risk mapping and the characteristics of local disaster risks. Thus, community members themselves started to be aware and understand local hazards and their corresponding risks, and are encouraged to reduce their own risks.”

Activists of Jangkar Kelud network developed community based techniques to explore hazard and vulnerability data and information from local village communities, and addressed the gaps in capacity in the local village governments and the people. It turned out that the learning process has become an awareness raising process for the other members of the community to reduce their own risks and increase preparedness. People became more and more aware of the need to continuously enhance their capacity and disseminate the lessons learned and the knowledge they gained to the other communities.

Guided by Kappala Indonesia Foundation, Jangkar Kelud network continues to collect important lessons in DRR. Community members found that, among others, although they had been living for ages in the vicinity of Kelud Volcano, they had not realized fully the risks posed by the volcano. Also, they found that disaster risk analysis might not be made on their own without collaboration with other external concerned actors. The assessment process also had a side effect in that it also motivated partners involved to do more for communities benefit. Community members taking part in the process were challenged to replicate the same process in neighboring villages in eruption-prone areas in Kelud Volcano.

Puspasari Indra, Regional EFSL Technical Coordinator Oxfam in Asia, presented her agency’s research on the livelihoods level of poor households in Jakarta. Employing the Household Economy Approach (HEA) Oxfam found that poor households in Jakarta spent 50% of their income on food consumption. This level of vulnerability had made the poor extremely susceptible to volatile shocks. Simulated shocks based on increase in oil price, one-month flooding, and one year flooding, for instance, showed how the capacity of the poor to meet their basic needs are progressively compromised into compounding vulnerability. To assist in the analysis Oxfam developed a magic calculator that may calculate

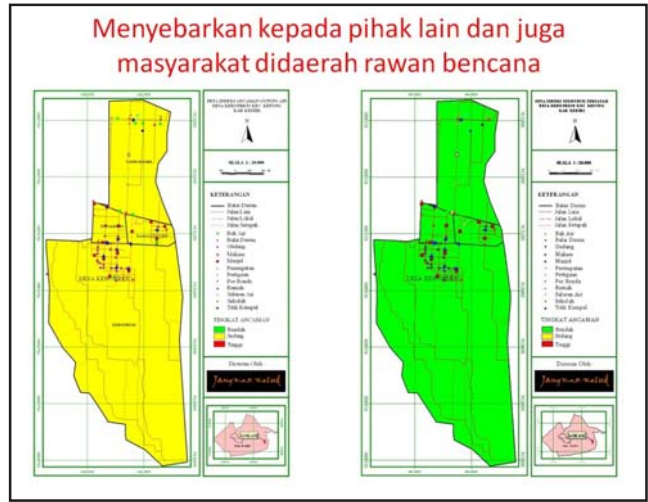


Jangkar Kelud community network developed a collective and participatory risk map at village (*kampung*).

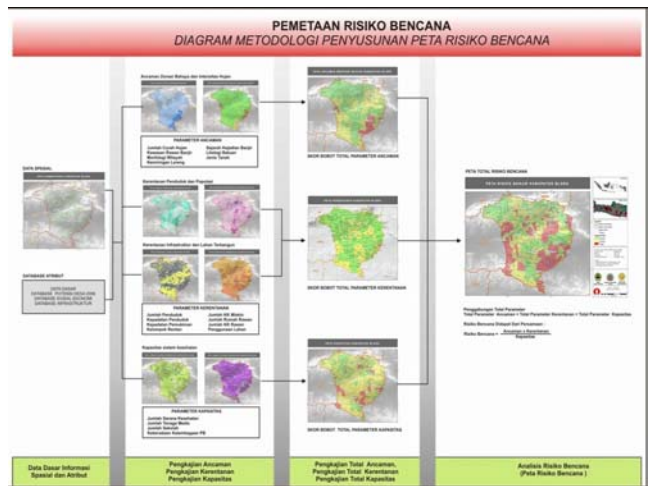
Dipandu oleh Yayasan Kappala Indonesia, komunitas Jangkar Kelud memperoleh pembelajaran yang penting. Walaupun mereka secara turun temurun tinggal di lereng G. Kelud, tapi ternyata ancaman yang ada tidak hanya berasal dari erupsi Gunung Kelud. Membuat kajian risiko bencana tidak bisa sendiri, namun membutuhkan data dan kerjasama pihak lain. Proses melakukan kajian ini menjadikan semangat untuk 'semakin menyadari' untuk 'berbuat lebih'. Masyarakat yang terlibat semakin tertantang untuk melakukan ke semua desa tetangga dan tertantang menyebarkan ke sesama warga di Kawasan Rawan Bencana (KRB) G. Kelud.

Regional EFSL Technical Coordinator Oxfam in Asia, Puspasari Indra memaparkan mengenai kajian rumah tangga di Jakarta. Dengan menggunakan alat kerangka analisis Household Economy Approach (HEA) dapat hasil bahwa 50% kelompok miskin di Jakarta menghabiskan pendapatannya untuk konsumsi (makan). Tingkat kerentanan ini membuktikan penurunan kualitas kehidupan dalam skenario kenaikan harga BBM dan menimbulkan dampak yang luar biasa merusak dalam skenario banjir 1 bulan dan apalagi banjir 1 tahun. Sebagai alat bantu analisis dikenalkan 'kalkulator ajaib' untuk memasukkan data dan memproyeksikan hasil analisis HEA.

Direktur Pujiono Centre, Rinto Andriano memaparkan, "BNPB sudah menerbitkan Peraturan Kepala BNPB Nomor 15 Tahun 2011 tentang Kajian Kebutuhan Pasca Bencana (JITU PB) untuk memandu pemerintah, pemerintah daerah dan para pemangku kepentingan dalam menilai: akibat bencana, dampak bencana dan kebutuhan pemulihan, (2) memberi perspektif pengurangan resiko bencana dan pemenuhan hak-hak dasar dalam pemulihan awal dan rehabilitasi dan rekonstruksi pasca bencana". Prinsip-prinsip yang dipakai adalah partisipatif, berbasis bukti, pengurangan risiko bencana, berbasis hak-hak dasar, akuntabilitas, dan mendasari penyusunan rencana aksi rehabilitasi dan rekonstruksi. Komponen dan keluaran JITU PB meliputi (1) pengkajian akibat bencana (kerusakan, kerugian, gangguan akses, gangguan proses, resiko), (2) pengkajian dampak bencana (ekonomi dan fiskal, sosial



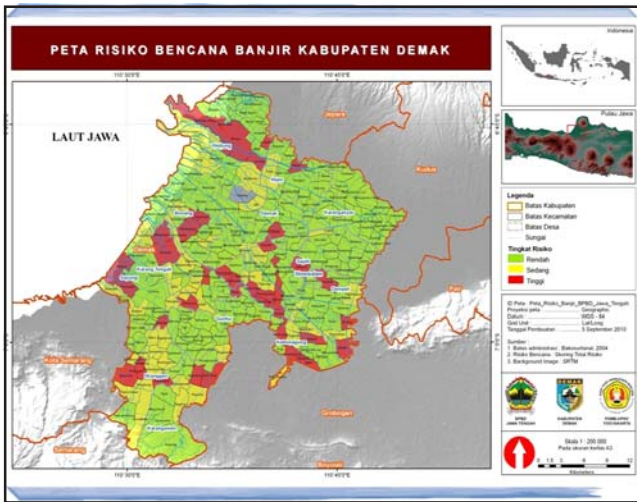
Village (*kampung*) level risk map developed by Jangkar Kelud community network.



The methodology for flood disaster risk map development developed by PSMB of UPN Veteran Yogyakarta.

the results of the HEA by just inputting data on the pre-designed format.

Director of Pujiono Centre, Rinto Andriano elaborated that, "BNPB has enacted the Regulation Number 15 Year 2011 on Post-Disaster Need Assessment (PDNA) to guide national and local governments as well as non-governmental stakeholders in assessing: disaster impacts and consequences, and their corresponding recovery needs, as well as providing disaster risk reduction and fulfillment of basic rights perspectives in post-disaster early recovery and rehabilitation and reconstruction". This assessment has to meet the principles of participatory, evidence-based, disaster risk reduction, fulfillment of basic rights, accountability, and become the foundation of the formulation of rehabilitation and reconstruction plan. The outputs of PDNA include (1) analysis of disaster impacts (damages, losses, disruption in processes, risks), (2) analysis of disaster impacts on the economy and fiscal, social and cultural, human development, and the environment, and (3) analysis of post-disaster needs (development, asset replacement, provision of assistance, recovery processes, and risk reduction).



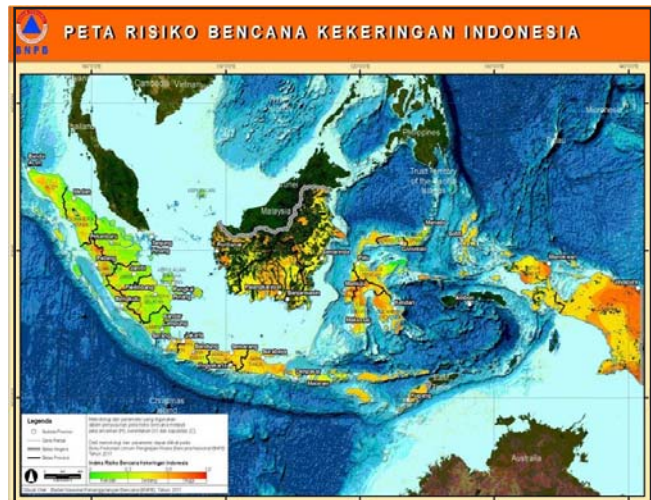
Flood disaster risk map developed by PSMB of UPN Veteran Yogyakarta.



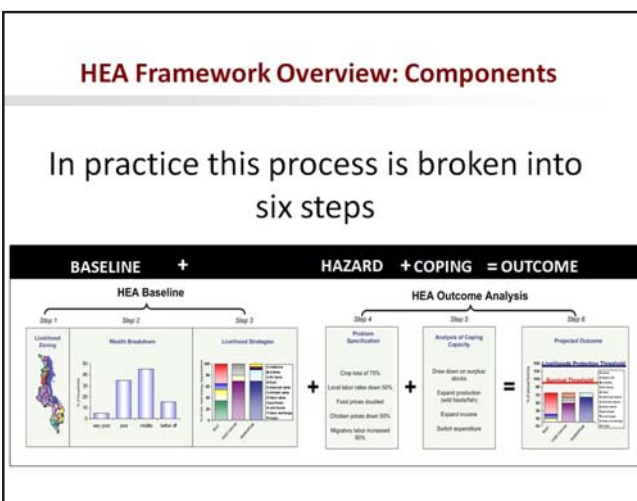
Disaster risk analysis method developed by BNPB.



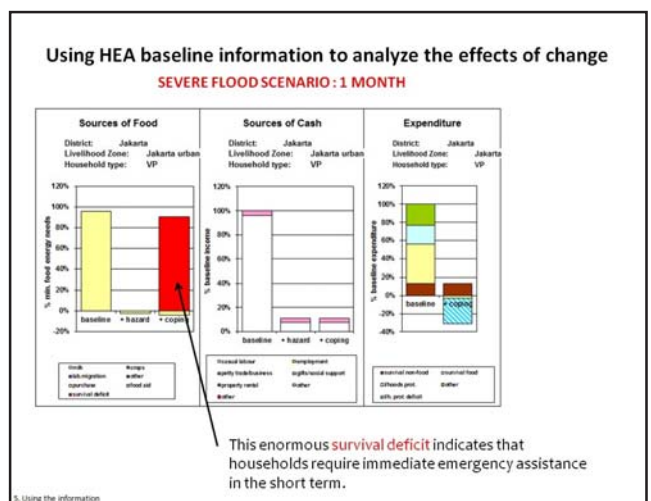
Disaster risk analysis method developed by BNPB.



Drought disaster risk map developed by BNPB.



Household Economy Analysis developed by Oxfam.



Result of Household Economy Analysis using flood hazard scenario in Jakarta.

dan budaya, pembangunan manusia, lingkungan), dan (3) pengkajian kebutuhan pasca bencana (pembangunan, penggantian, penyediaan bantuan, pemulihan proses, pengurangan risiko).

Pada akhir seminar disimpulkan bahwa pengkajian risiko bencana sebagai landasan yang berbasis bukti memerlukan komponen yang saling melengkapi yaitu parameter keilmuan dan perspektif masyarakat. Aspek sosio kultural memainkan peranan penting untuk memahami persepsi masyarakat tentang risiko bencana dan, pada saatnya, meningkatkan kualitas upaya-upaya PB. Sementara aspek politik ekonomi pada tingkat lokal menjelaskan dinamika penguasaan sumberdaya yang menjadi konteks yang krusial dalam analisis kerentanan dan kesenjangan kapasitas.

Pengkajian risiko berbasis masyarakat sudah di-'pilot'-kan di beberapa lokasi dengan titik berat pada kerentanan dan kesenjangan kapasitas. Dalam konteks itu analisis risiko bencana tingkat rumah tangga dan tingkat komunitas mempunyai potensi untuk digabungkan menjadi suatu pengkajian yang integral. Juga terdapat potensi integrasi antara pengkajian risiko bencana dan adaptasi perubahan iklim berdasarkan kesamaan ranah kerja, pendekatan dan tujuan keluaran.

Dalam kaitannya dengan respon bencana, berbagai proses analisis risiko melengkapi satu sama lain menjadi satu keseluruhan pada berbagai fase PB, yaitu pra bencana, respon bencana dan pasca bencana. Penilaian kebutuhan yang selama ini diterapkan pada berbagai fase PB merupakan suatu analisis risiko bencana dan untuk memenuhi tujuan yang berbeda-beda sesuai dengan fase PB.

Seminar ini menunjukkan bahwa pengkajian risiko bencana di tingkat masyarakat, pemerintah lokal dan nasional telah mengembangkan piranti dan indeks-indeks yang cukup canggih. Berbagai piranti pengkajian risiko mempunyai potensi saling melengkapi dan dalam konteks itu perlu diinventarisasi dan dievaluasi kegunaannya.

Peluang ke depan untuk Indonesia adalah dalam memberikan legitimasi pada berbagai inisiatif dan inovasi analisis risiko bencana berbasis masyarakat untuk kemudian dapat dipasangkan dengan pendekatan makro dan orientasi ilmiah pemerintah nasional. Bersama-sama kedua pendekatan ini perlu didorong untuk membangun analisis risiko bencana yang berbasis bukti dan, pada saatnya, membantu suatu PB yang lebih efektif dan akuntabel.

Catatan:

- 1 BNPB: 1.598 Bencana Alam Terjadi Ditahun 2011 <http://news.okezone.com/read/2011/12/30/337/549497/bnpb-1-598-bencana-alam-terjadi-ditahun-2011>
- 2 Dana Penanggulangan Bencana di Daerah Masih Minim <http://m.inilah.com/read/detail/1840413/dana-penanggulangan-bencana-di-daerah-masih-minim>

The Seminar concluded that disaster risk assessment as the foundation of evidence-based disaster management requires the combination and good complementary mix of scientific parameters and community's perspectives. Socio-cultural aspects played a critical role in understanding the perspectives of the communities related to the risks they were facing. Meanwhile, the economic politics aspects at the local level clarified the dynamics of resources ownership that became a crucial context in vulnerability and capacity gaps analysis.

Community-based risk assessments have been piloted in many risk settings with emphasis on examining vulnerability and capacity gaps. Disaster risk analysis at the household and community levels might be combined into an integrated assessment. Similarly, there was a potential to integrate assessments for disaster and climate change risks, particularly those that shared the same scope, approach and objectives.

The seminar demonstrated that disaster risk assessments have been implemented at the community level, and at the local government and national government levels. The stakeholders have developed sometimes complex instruments and risk indexes. All these instruments for risk assessment have the potential to complement each other, and hence need to be inventoried and evaluated for further harmonization.

In the future government needs to be active in providing legitimacy for various community-based risk assessment initiatives and innovations. A process needs to be initiated to match up the macro perspectives and science-based risk assessments with those that are more community-based approaches with the same footing. Both approaches need to be enhanced to build evidence-based disaster risk assessment system, which in turn may help in building more effective and accountable disaster management in the region.

Notes:

- 1 BNPB: 1.598 Natural Disaster in 2011 <http://news.okezone.com/read/2011/12/30/337/549497/bnpb-1-598-bencana-alam-terjadi-ditahun-2011>
- 2 Disaster Budget in the Regions is still Limited <http://m.inilah.com/read/detail/1840413/dana-penanggulangan-bencana-di-daerah-masih-minim>



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