



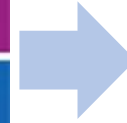
Community Based Disaster Risk Reduction

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The Disaster Impacts on SDGs



Sendai Framework Disaster Risk Reduction 2015 – 2030 and SDGs



Lingkages of Sendai Framework (2015 – 2030) and SDG's 2030



Fig. 1 Links between sendai framework targets and sustainable development goals

Priorities of the Sendai Framework Disaster Risk Reduction

4 PRIORITIES

Understanding disaster risk

Strengthening disaster risk governance to
manage disaster risk

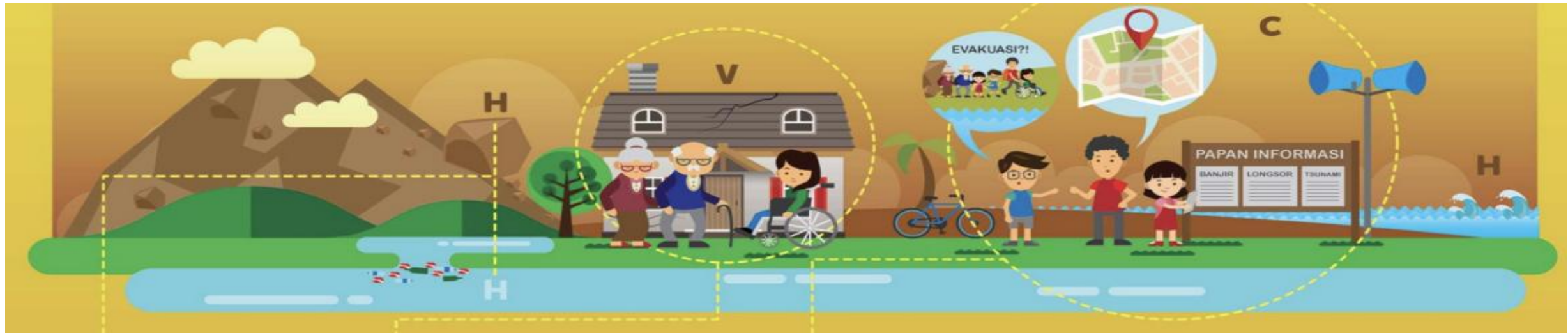
Investing in disaster risk reduction for
resilience

Enhancing disaster preparedness for effective
response, and to “Build Back Better” in
recovery, rehabilitation and reconstruction



Disaster Response → **Disaster Risk Reduction**

Disaster Risk



$$\text{RISK (R)} = \frac{\text{H} \times \text{C}}{\text{V}}$$

RISK will be reduced if VULNERABILITY is reduced and CAPACITY is increased. However, potential HAZARD will always threaten.

R= Risk

Potential losses due to disasters within a certain period of time such as death, injury, illness, loss of sense of security, displacement, damage or loss of property, and disruption of community activities

H= Hazard

Events that have the potential to cause accidents, injuries, loss of life and property

V= Vulnerability

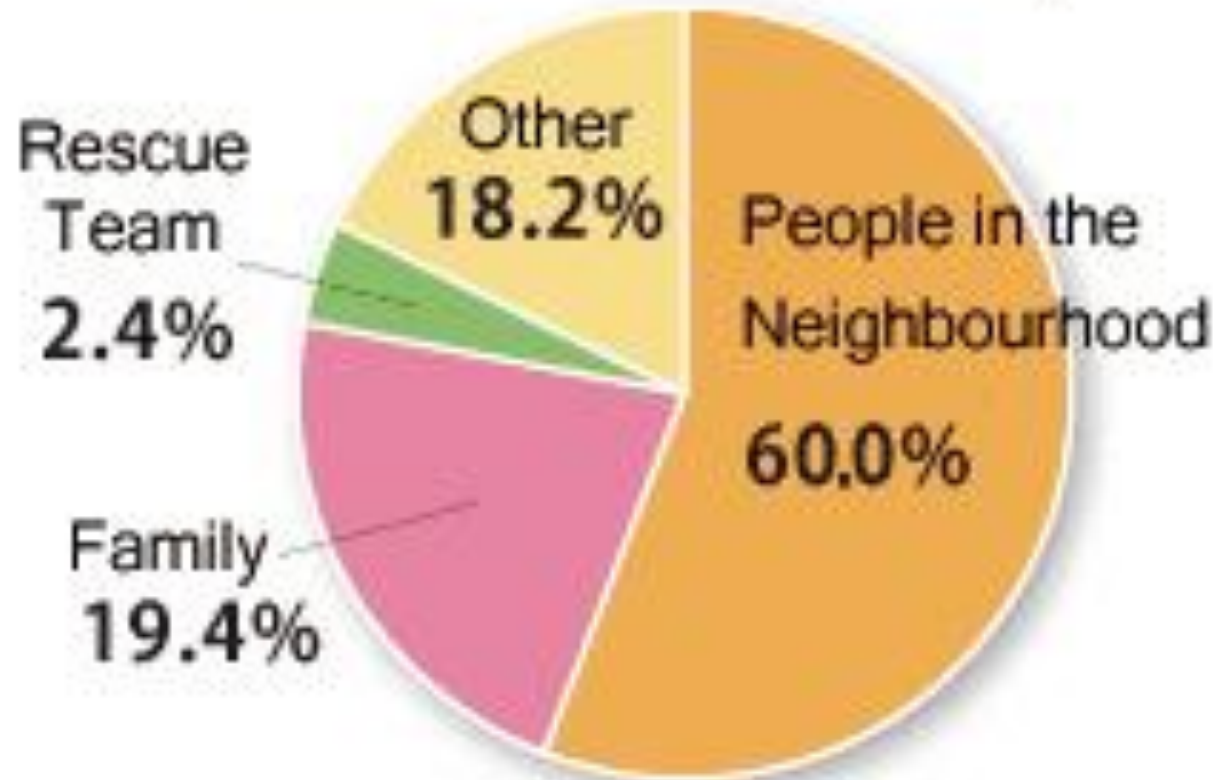
Conditions that aggravate disaster risks (physical, social conditions and community capacity in preventing, mitigating and preparing for the impacts of hazards)

C= Capacity

The ability of individuals, community groups, or institutions to utilize various resources to respond to disaster risks

Community Based Disaster Risk Reduction

People who took part in aid
and rescue operations during
the Great Hanshin-Awaji Earthquake



Sources: <http://www.ifie.or.jp/ifie-disaster/english/02.html>



Disaster

A serious **disruption of the functioning of a community** or a **society** at any scale due to **hazardous events** interacting with conditions of **exposure, vulnerability and capacity**, leading to one or more of the following: human, material, economic and environmental losses and impacts.

(United Nation Disaster Risk Reduction; UNDRR)

RENAS PB 2025-2029

- a. pengenalan dan pengkajian ancaman bencana;
- b. pemahaman tentang kerentanan masyarakat;
- c. analisis kemungkinan dampak bencana;
- d. pilihan tindakan pengurangan risiko bencana;
- e. penentuan mekanisme kesiapan dan penanggulangan dampak bencana; dan
- f. alokasi tugas, kewenangan, dan sumber daya yang tersedia.



PERATURAN BADAN NASIONAL PENANGGULANGAN BENCANA
REPUBLIK INDONESIA
NOMOR 1 TAHUN 2025
TENTANG
RENCANA NASIONAL PENANGGULANGAN BENCANA TAHUN 2025-2029
DENGAN RAHMAT TUHAN YANG MAHA ESA
KEPALA BADAN NASIONAL PENANGGULANGAN BENCANA
REPUBLIK INDONESIA,

Menimbang : bahwa untuk melaksanakan ketentuan Pasal 4 ayat (2) Peraturan Presiden Nomor 87 Tahun 2020 tentang Rencana Induk Penanggulangan Bencana Tahun 2020-2044, perlu menetapkan Peraturan Badan Nasional Penanggulangan Bencana tentang Rencana Nasional Penanggulangan Bencana Tahun 2025-2029;

Mengingat : 1. Undang-Undang Nomor 24 Tahun 2007 tentang Penanggulangan Bencana (Lembaran Negara Republik Indonesia Tahun 2007 Nomor 66, Tambahan Lembaran Negara Republik Indonesia Nomor 4723);
2. Peraturan Presiden Nomor 1 Tahun 2019 tentang Badan Nasional Penanggulangan Bencana (Lembaran Negara Republik Indonesia Tahun 2019 Nomor 1) sebagaimana telah diubah dengan Peraturan Presiden Nomor 29 Tahun 2021 tentang Perubahan atas Peraturan Presiden Nomor 1 Tahun 2019 tentang Badan Nasional Penanggulangan Bencana (Lembaran Negara Republik Indonesia Tahun 2021 Nomor 103);
3. Peraturan Presiden Nomor 87 Tahun 2020 tentang Rencana Induk Penanggulangan Bencana Tahun 2020-2044 (Lembaran Negara Republik Indonesia Tahun 2020 Nomor 204);

MEMUTUSKAN:

Menetapkan : PERATURAN BADAN NASIONAL PENANGGULANGAN BENCANA TENTANG RENCANA NASIONAL PENANGGULANGAN BENCANA TAHUN 2025-2029.

Why Community-Based Disaster Risk Reduction?



- A disaster is **localized** and it happens in the community.
- People in the community themselves are **the affected** and **the first responders**.
- Communities have accumulated **local knowledge** in addressing hazard events.
- **Communities are survivors**, not victims.
- Community organization is a mechanism for **successful disaster risk reduction initiatives**, and the government is a major player.
- The community **decides if they are in a state of disaster**: (i) if they cannot cope and need outside help, or (ii) they can cope and have the capacity to face the challenge at hand.

Local knowledge on Disaster Risk Reduction



International Journal of Disaster Risk Reduction

Volume 65, November 2021, 102527



Nandong smong and tsunami lullabies: Song and music as an effective communication tool in disaster risk reduction

Stephen A. Sutton^a, Douglas Paton^a, Petra Buergelt^b, Saut Sagala^c, Ella Meilianda^d

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<https://doi.org/10.1016/j.ijdr.2021.102527>

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Abstract

Growing international appreciation of the increasing risk posed by natural hazard events acknowledges the effects that climate change and increasingly vulnerable populations will have on future costs and casualties of disasters. As concerns about the impacts of natural hazard events increase, researchers and practitioners are interested in identifying effective processes to build individual and [community resilience](#). To date, despite resources, time and effort being made by governments and [NGOs](#) to encourage disaster risk reduction (DRR) programs at national, regional and local levels, most communities remain poorly prepared, and improvements have only been incremental.

Disaster Mitigation Model of Eruption Based on Local Wisdom in Indonesia

Eko Hariyono and Solaiman Liliyasi

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/intechopen.79217>

Abstract

Kelud is one of the most active volcanoes in Indonesia and suffered a major eruption in 2014. Although they are not part of the super volcano, the impact of the eruption is extraordinary. However, the eruption is not too worrying for the surrounding community. The lack of disaster victims caused by the eruption in 2014 became a successful representation of disaster mitigation models owned by local communities in answering the eruption problem. The easy evacuation process and quickly post-eruption rehabilitation illustrate a pattern of environmental adaptation around the volcano. This discussion focuses on how the people behavior around the volcano in responding to the challenge of eruption? How the role of local government in preparing the community in the face of an eruption, and what actions are done so that the rehabilitation process can take place quickly? To answer all these questions, the researchers collected relevant data through observation, documentation, and interviews with the local communities and local government representatives directly involved in disaster mitigation measures. In addition, the researchers also revealed local traditions that are considered capable of supporting the process of preparing the community in answering the eruption challenges and becoming part of disaster mitigation in the volcanic region.

Keywords: disaster mitigation model, volcanic eruption, natural disaster, local wisdom in Indonesia

E3S Web of Conferences **600**, 02001 (2024)
IGEOS 2023

<https://doi.org/10.1051/e3sconf/202460002001>

Disaster, environment and local indigenous knowledge in Indonesia

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Abstract. Indonesia is a disaster-prone area due to its complexity in geographical and geological location. For thousands of years, Indonesian society has interacted with various natural disasters. This research aims to summarize and synthesize community adaptation to various disasters by referring to their local indigenous knowledge. Data came from previous studies recorded in two most reputable scientific databases, namely Web of Science and Scopus, 1980 to 2023. Our review used a qualitative approach with content analysis, resulting in 16 articles that were suitable for meta-analysis. This research shows that local indigenous knowledge in Indonesian society has included environmental adaptations to several disasters, such as floods, landslides, tsunamis, earthquakes, plagues, volcanic eruptions, and other hydrometeorological extreme events. Local indigenous knowledge is mostly spoken orally through various traditions, traditional houses, living equipment, poetry, regional zoning, and traditional institutions that imply disaster events, but there are no written remains. Their experience has not shown any adaptation to disaster-induced environmental changes due to climate change and global warming. Our research can provide input for disaster mitigation that is more appropriate to the local context.

CBDRR



- Communities are the first responders in case of a disaster. Therefore, community-based disaster risk reduction (CBDRR) should be **the core of any risk reduction approach** (Shaw 2016)
- Community-based disaster risk reduction is a process within a community and for the community. In CBDRR, the **community and its most vulnerable groups are the primary actors** while outsiders have supportive and facilitative roles from situational analysis to the planning and implementation of risk reduction and disaster preparedness measures (UNISDR, 2010)
- Community-based disaster risk reduction focuses more on **predisaster interventions** such as prevention, mitigation, and preparedness-related activities for risk reduction by the communities (UNDRR, 2006)

The Key Elements of CBDRR

- People's **participation** is important
- **Priorities** are set for the most vulnerable groups, families, and people in the community
- **Risk reduction measures are community-specific** : Measures provided for risk reduction are mainly community-specific, which are identified after an analysis of the community's disaster risk (hazards, vulnerabilities, and capacities and perceptions of disaster risk).
- **Existing capacities and coping mechanisms are recognized**: The strength of CBDRR lies in the existing capacities and coping mechanisms of the community members.
- **Disaster risk reduction is linked with development**: The aim of CBDRR is to **reduce people's vulnerabilities** by **strengthening the capacities** of individuals, families, and communities

(Shaw, 2016)

CBDRR Vs Traditional Approach

CBDRR

- People affected by disasters are **active actors** in rebuilding their lives and livelihood.
- People **capacities** are used and built on through their
- Damage, needs and capacity assessment are done with **people's participation** considering gender, culture, children and age.
- Focus on individual, family, community **preparedness and strengthening** its organization.
- Community members **participate in decision - making** to prioritize needs and risk reduction measures.
- The aim is to reduce long – term vulnerabilities and to increase people's capacities to better cope with disasters. **Building a safe, disaster resilient and developed community**

Traditional

- People affected by disasters are **helpless** victims
- Victims are **passive recipients** of external aid.
- Damage and needs assessment are rapidly done by **external** experts.
- Focus on **individual households**
- Donors (**outsiders**) **decide** on what the affected families and community needs.
- The aim of disaster management is to reduce the immediate suffering and meet emergency needs, and to **bring things back to normal**.

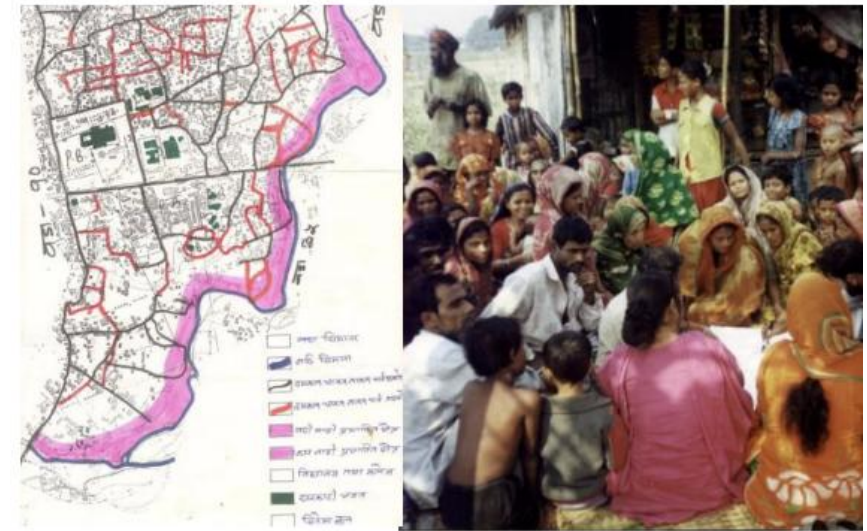
Characteristic of CBDRR

- Participatory process
- Responsive
- Proactive
- Comprehensive
- Integrated
- Multi-sectoral & Multi-disciplinary
- Empowering
- Developmental



Code of Conduct CBDRR

- Respect for community members
- Interest in what community members know, say, show and do
- Include EVERYBODY – seek out for least participating (women, children, elderly, persons with disability)
- Culturally sensitive
- Relaxed, open, friendly, compassionate, humility
- Learn from the community
- Careful not to raise too much expectations



Let the communities identify and solve their problems together after identifying the risks

Desa & Kelurahan Tangguh Bencana



BUKU PEDOMAN
LATIHAN KESIAPSIAGAAN BENCANA

**MEMBANGUN KESADARAN,
KEWASPADAAN
DAN KESIAPSIAGAAN
DALAM MENGHADAPI
BENCANA**

BNPB: Perka BNPB No. 01/2012

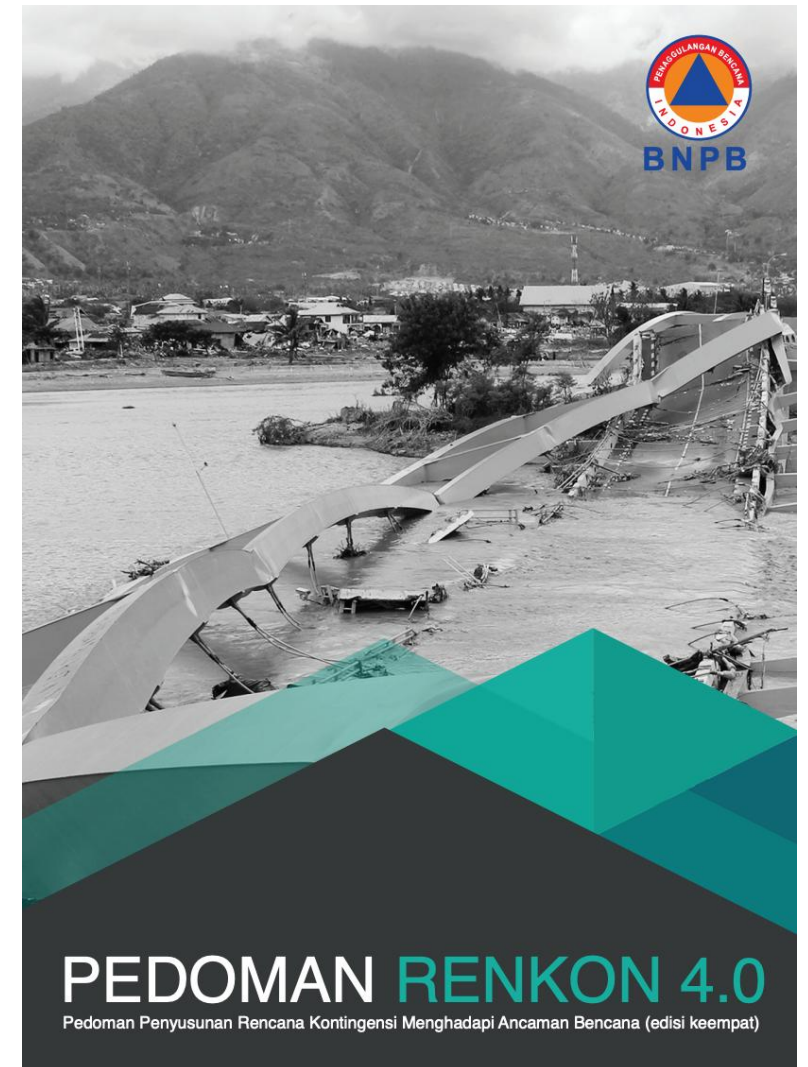
Desa dan Kelurahan Tangguh Bencana adalah desa dan kelurahan yang memiliki kemampuan mandiri untuk beradaptasi dan menghadapi ancaman bencana, serta memulihkan diri dengan segera dari dampak bencana yang merugikan, jika terkena bencana.

Sebuah desa dan kelurahan yang memiliki ketangguhan bencana mampu melaksanakan kegiatan-kegiatan **pengurangan risiko bencana** dengan **mendayagunakan sumber daya lokal, keahlian setempat, dan nilai-nilai kearifan lokal** untuk mempersiapkan diri dalam menghadapi kejadian bencana.

**Perka BNPB No. 1/2012 tentang
Pedoman Umum
Desa/Kelurahan Tangguh
Bencana**

Rencana Kontinjensi/ Contingency Plan

“rencana kontinjensi” adalah suatu proses perencanaan ke depan terhadap keadaan yang tidak menentu untuk mencegah, atau menanggulangi secara lebih baik dalam situasi darurat atau kritis dengan menyepakati skenario dan tujuan, menetapkan tindakan teknis dan menejerial, serta tanggapan dan pengeralahan potensi yang telah disetujui bersama.



Prinsip-Prinsip Desa/Kelurahan Tangguh Bencana

PANDUAN Penilaian Ketangguhan Desa/Kelurahan



Komponen	Indikator	Nomor Pertanyaan
Komponen 1. Layanan Dasar	Indikator 1 s/d 14	1 s/d 76
Komponen 2. Peraturan dan Kebijakan Penanggulangan Bencana	Indikator 15 s/d 19	57 s/d 60
Komponen 3. Kesiapsiagaan Bencana	Indikator 20 s/d 25	77 s/d 100

TANGGUH UTAMA <83,33
TANGGUH MADYA 58,3 – 83,33
TANGGUH PRATAMA <58,3

Keluarga Tangguh Bencana (KATANA)

WUJUD KELUARGA TANGGUH BENCANA

Setiap anggota keluarga perlu mengetahui risiko bencana yang berpotensi terjadi di lingkungannya. Tidak hanya risiko bencana di rumahnya, namun juga risiko bencana yang ada pada lingkungan aktivitas harian tiap-tiap anggota keluarga, baik aktivitas rutin, atau pun aktivitas temporer, seperti liburan, kunjungan keluarga dan sebagainya.

1. MENGENAL RISIKO BENCANA

Setiap keluarga yang berada di daerah rawan bencana perlu merencanakan bagaimana evakuasi keluarga dilakukan jika bencana terjadi. Perencanaan tersebut disusun dengan memperhatikan aktivitas harian tiap-tiap anggota keluarga.

3. RENCANA SIAGA BENCANA

5. EVAKUASI MANDIRI KELUARGA

2. MENGENAL RUMAH AMAN BENCANA

Setiap anggota keluarga perlu mengetahui dan memperkuat struktur bangunan rumahnya. Tidak hanya struktur bangunan rumah, namun juga infrastruktur rumah, fasilitas dan perabot yang ada didalam rumah.

4. PERINGATAN DINI BENCANA

Setiap keluarga yang berada di daerah rawan bencana perlu memastikan dirinya memiliki kemampuan dan fasilitas untuk menerima informasi peringatan dini.

Setiap anggota keluarga dapat melakukan simulasi evakuasi secara mandiri.

BUKU

KELUARGA TANGGUH BENCANA



Modul Pelatihan Fasilitator
Desa/Kelurahan Tangguh Bencana dan
Kegiatan Penguatan Masyarakat Serupa
EDISI VIII 2020



Direktorat Pemberdayaan Masyarakat
Deputi Bidang Pencegahan dan Kesiapsiagaan
Badan Nasional Penanggulangan Bencana

Keluarga yang telah memenuhi standar ketangguhan keluarga berupa pengetahuan, kesadaran, ketrampilan yang terus dikembangkan untuk mengurangi korban jiwa pada saat terjadi Bencana (BNPB, 2019)

Taruna Siaga Bencana (Tagana)

Kementerian Sosial → Permensos No. 82/HUK/2006.

Tujuan : Menindaklanjuti perubahan paradigma dalam penanggulangan bencana; **dari tanggap darurat, ke pencegahan yang proaktif dan pengurangan risiko.**

Relawan yang disasar adalah mereka yang berumur antara **18 hingga 40 tahun.**

Mengikuti pelatihan PRB yang diselenggarakan oleh Kementerian Sosial, yang meliputi pelatihan: (i) **Logistik**; (ii) **Hunian** dan (iii) **Dukungan Psikologis.**

<http://www.bphn.go.id/data/documents/06pmsos082.pdf>



Kemensos: Permensos No. 82/HUK/2006

Difagana (Difabel Siaga Bencana)



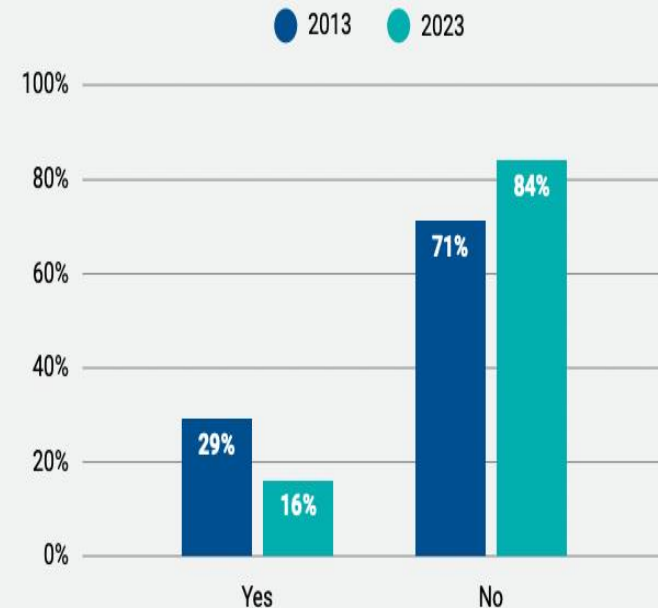
“Undang-undang Nomor 24 tahun 2007 tentang Penanggulangan Bencana menyebutkan bahwa kelompok **disabilitas merupakan kelompok yang dilindungi dalam kejadian bencana** (sebagai objek), namun penyandang disabilitas juga dapat menjadi pelaku (subjek) dalam penanggulangan bencana melalui **peningkatan kapasitas kelompok tersebut,**”

Difagana (Difabel Siaga Bencana)

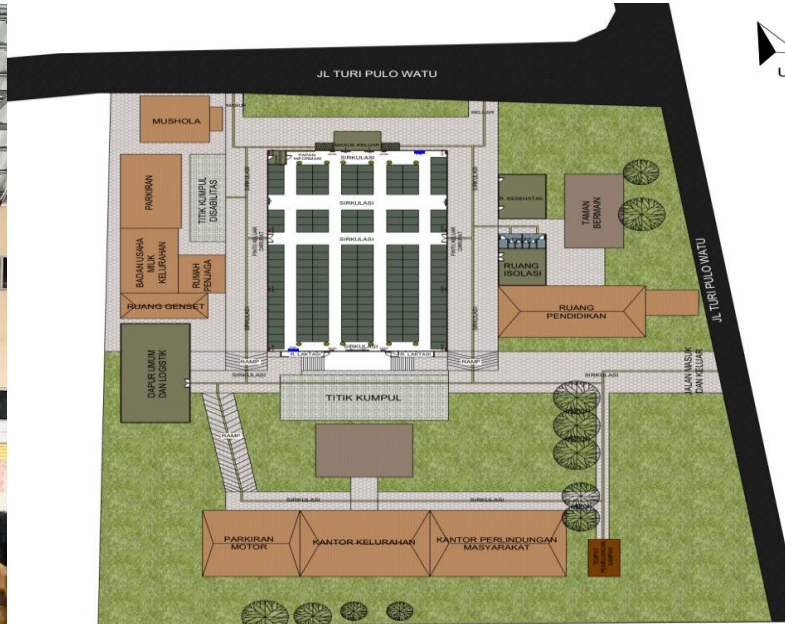
“Disasters impact everyone but have a disproportionate impact on persons with disabilities who continue to experience barriers to participation and societal exclusion. The Sendai Framework for Disaster Risk Reduction 2015-2030 commits to increase the participation of persons with disabilities in disaster risk reduction (DRR) and champions inclusive decision-making in which persons with disabilities are key stakeholders in determining the DRR plans and programmes that impact all our lives.”

SRSB Mami Mizutori

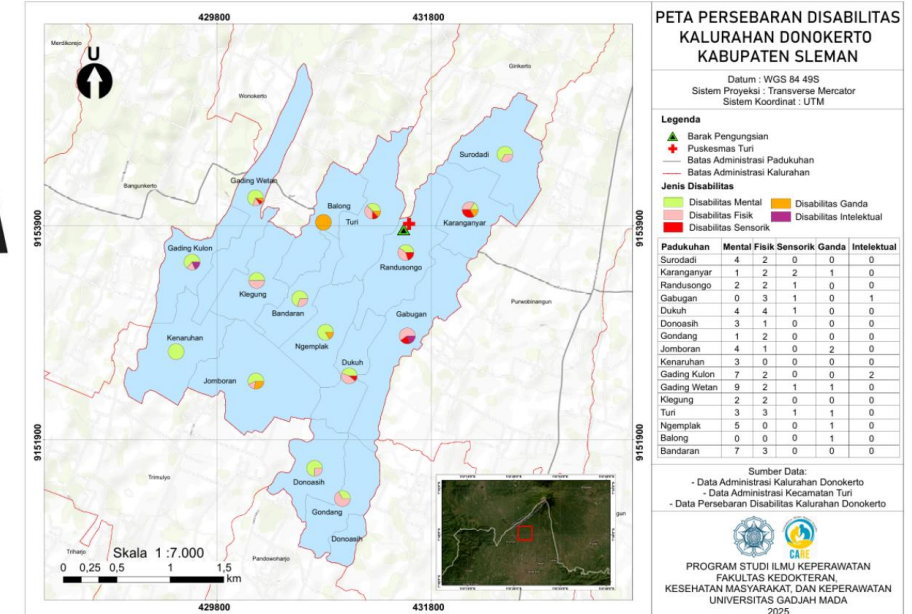
Do you have a personal preparedness plan for disasters?



Desa Tangguh Bencana yang Inklusif Di Kalurahan Donokerto, Sleman, Yogyakarta



Lampiran 4. Peta Sebaran Disabilitas Kalurahan Donokerto



Pemuda Siaga Peduli Bencana (Dasipena)



MENTERI KESEHATAN
REPUBLIK INDONESIA

KEPUTUSAN MENTERI KESEHATAN REPUBLIK INDONESIA
NOMOR: 406/Menkes/SK/IV/2008

TENTANG

PEMBENTUKAN PEMUDA SIAGA PEDULI BENCANA (DASI PENA)

MENTERI KESEHATAN REPUBLIK INDONESIA

- Menimbang :
- a. bahwa penanganan krisis kesehatan akibat bencana dan kedaruratan memerlukan tindakan cepat dan tepat agar dapat meminimalisasi jatuhnya korban,
 - b. bahwa untuk mendekatkan dan mempercepat dukungan bantuan kesehatan perlu merigikutsertakan secara aktif komponen masyarakat
 - c. untuk mewadahi keikutsertaan komponen masyarakat, terutama pemuda, dalam upaya penanggulangan bencana pada sektor kesehatan perlu dibentuk Pemuda Siaga Peduli Bencana yang ditetapkan dengan Keputusan Menteri Kesehatan

Kementerian Kesehatan → Permenkes No. 406/
Menkes/SK/IV/2008

Tujuan: **meningkatkan penyediaan layanan kesehatan** yang berkaitan dengan kebutuhan penanggulangan bencana dan **meningkatkan partisipasi relawan muda**.

[http://www.penanggulangankrisis.depkes.go.id/pub/files74608KMK_No_406_ttg_Pembentukan_Pemuda_Siaga_Peduli_Bencana_\(DASI_PENA\).pdf](http://www.penanggulangankrisis.depkes.go.id/pub/files74608KMK_No_406_ttg_Pembentukan_Pemuda_Siaga_Peduli_Bencana_(DASI_PENA).pdf)

Kemenkes: Permenkes No. 406/
Menkes/SK/IV/2008

Keluarga Sehat Tanggap dan Tangguh Bencana

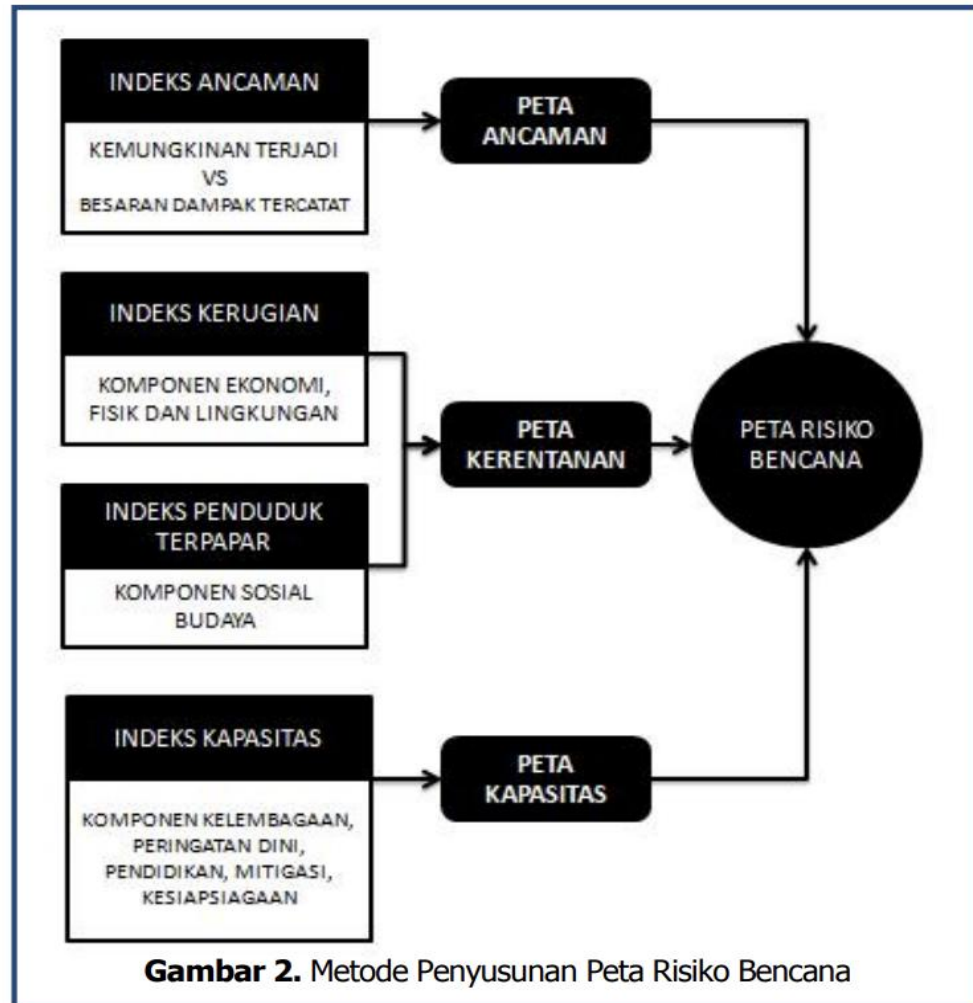
Tujuan Keluarga Sehat Tanggap dan Tangguh Bencana adalah:

- Kesehatan
- Kelestarian Lingkungan Hidup
 1. Mewujudkan Keluarga yang tanggap dan tangguh terhadap bencana Rumah Tangga
 2. Mewujudkan Desa/Kelurahan yang tanggap dan tangguh dalam tata laksanaan penanganan darurat bencana alam
 3. Meningkatkan komitmen masyarakat guna menjaga kelestarian lingkungan hidup untuk mewujudkan Desa/Kelurahan yang aman, nyaman, bersih dan sehat
- Perencanaan Sehat

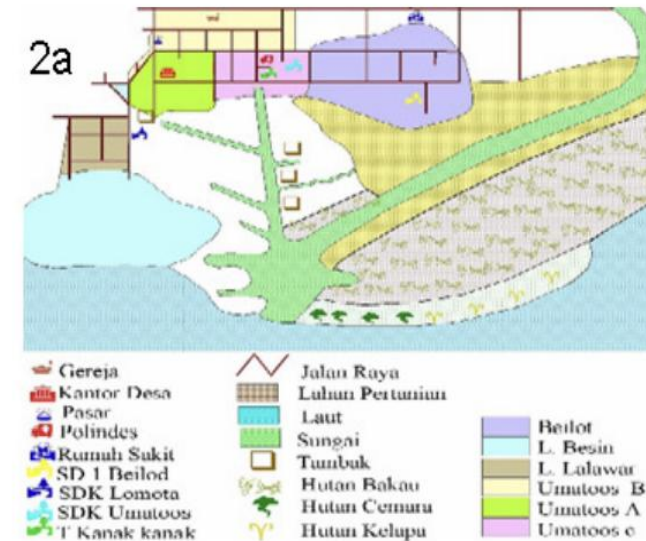
https://tppkk.acehprov.go.id/media/2023.01/juknis_gerakan_keluarga_sehat_tanggap_dan_tangguh_bencana1.pdf



Community Disaster Risk Assessment & Risk Maps



Gambar 1a. dan 1b. Penguatan kapasitas masyarakat secara partisipatif di Besikama, Belu © Foto PMPB Kupang.



Gambar 2.a Sketsa Geografis Desa Omatos, Kab. Belu, 2.b. Ilustrasi GIS Risiko Bencana Desa © Foto PMPB Kupang

Community Risk Reduction

Pre-disaster activities for risk reduction

- Introduction to the basic concepts of **community-based disaster risk reduction**
- **Disaster mitigation training** (e.g. training on disaster safe building standards, planting mangrove trees)
- **Training on Early Warning System (EWS)**
- **Community Based Disaster Preparedness Training/Disaster Drills**
- Preparation of **emergency/disaster contingency plans** and inclusive operational standards
- **Training for the community on disaster preparedness culture** (Budaya Siaga Bencana)
- **Training on Rescuing, evacuating and delivering logistics.**
- **Introduction to the equipment of rescue and communication tools**
- **Disaster Safety Education Procedures and Tools for First Aid**



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