IDEP

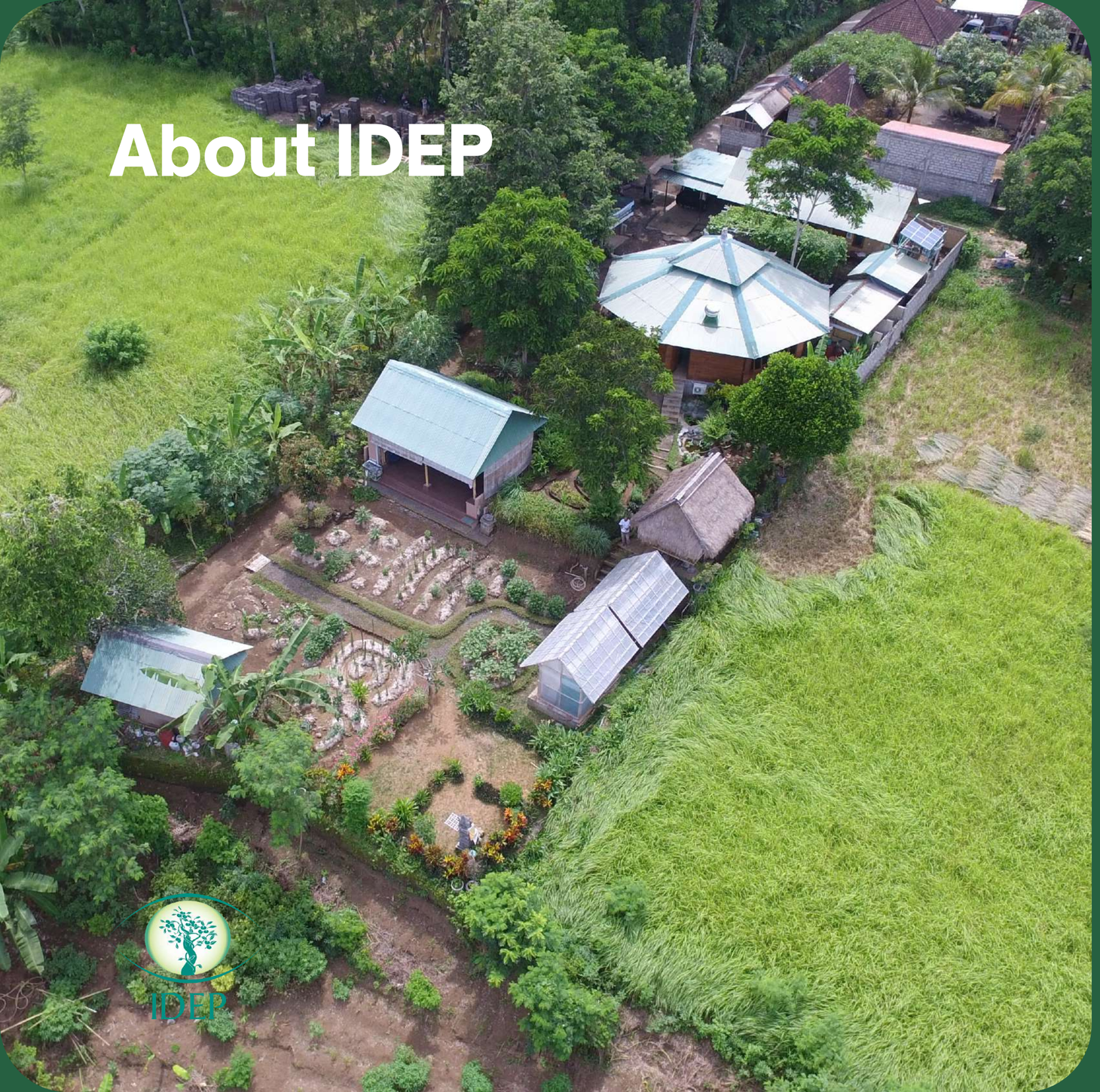
IDEP Foundation

Community Resilience Design

Permaculture Based Disaster Mitigation & Response

Presented by
Rangga Wisnu

Date:
20 October 2021



About IDEP

IDEP Foundation /
Yayasan IDEP Selaras Alam

⊷Established in 15 May 1999

⊷At the beginning IDEP is abbreviation of Indonesia Development of Education in Permaculture.

⊷The name changed in 2005 as Idep Selaras Alam, mixed of Balinese language (idep) with bahasa Indonesia, with meaning the heart and mind interconnectedness with nature

Contents

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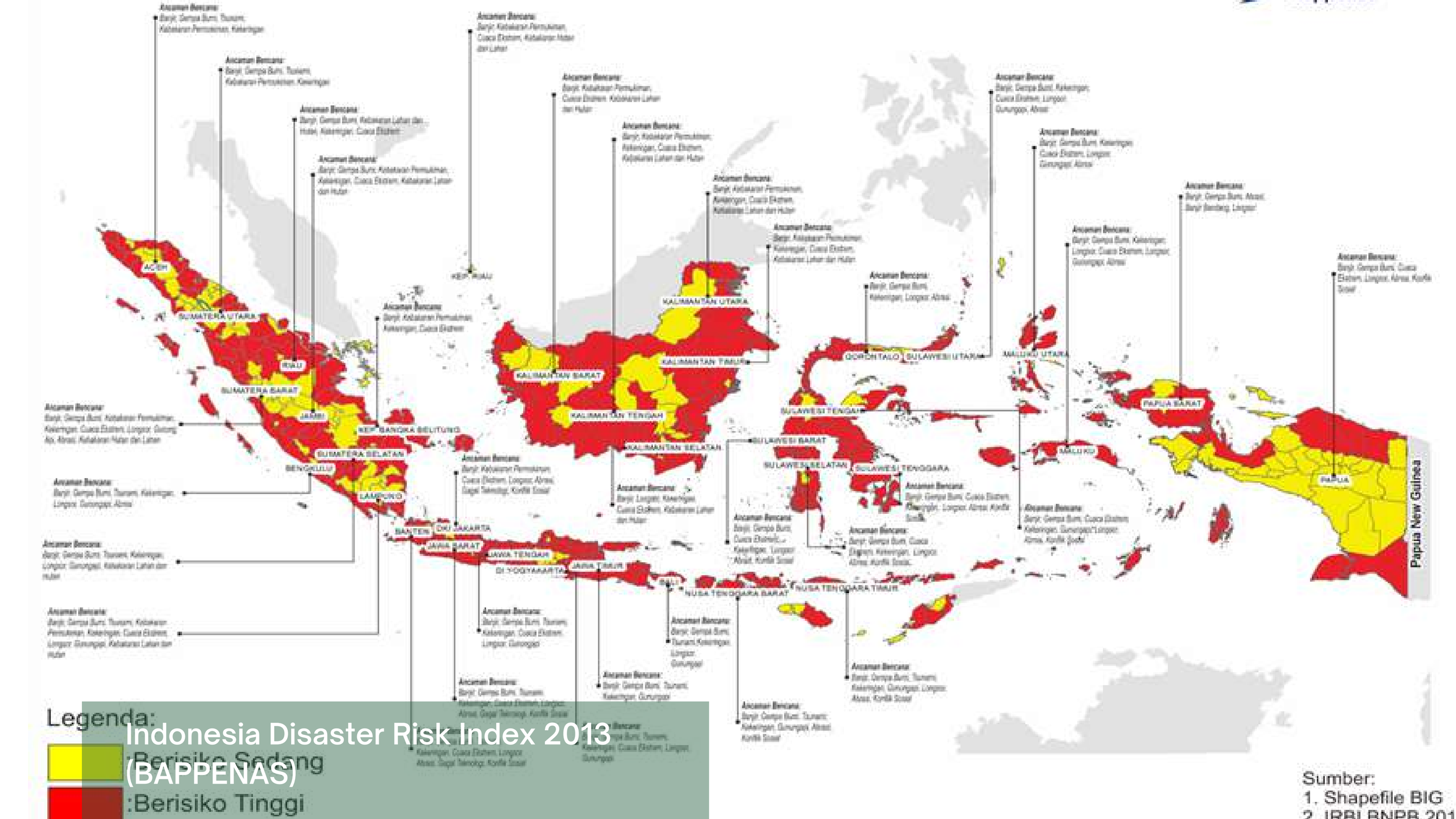
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ACEH
SUMATERA UTARA
RIAU
SUMATERA BARAT
JAMBI
KEP. BANGKA BELITUNG
SUMATERA SELATAN
BENGKULU
LAMPUNG
BANTEN
DKI JAKARTA
JAWA BARAT
JAWA TENGAH
DI YOGYAKARTA
JAWA TIMUR
BALI
NUSA TENGGARA BARAT
NUSA TENGGARA TIMUR
KEP. RIAU
KALIMANTAN BARAT
KALIMANTAN UTARA
KALIMANTAN TIMUR
KALIMANTAN TENGAH
KALIMANTAN SELATAN
GORONTALO
SULAWESI UTARA
SULAWESI TENGAH
SULAWESI BARAT
SULAWESI SELATAN
SULAWESI TENGGARA
MALUKU UTARA
MALUKU
PAPUA BARAT
PAPUA
Papua New Guinea
Legenda:
:Berisiko Sedang
:Berisiko Tinggi
Indonesia Disaster Risk Index 2013
(BAPPENAS)
Sumber:
1. Shapefile BIG
2. IRBI BNPB 201

BNPB

PERIODE 1 JANUARI 2019 - 31 DESEMBER 2019

juga menimbulkan penduduk terdampak dan mengungsi lebih dari 6 juta jiwa, merenggut 589 jiwa meninggal & hilang serta 3.421 luka-luka.

Total Disasters in 2019

3.814

SEBARAN KEJADIAN BENCANA 1 JANUARI 2019 - 31 DESEMBER 2019

JUMLAH KEJADIAN PER-JENIS BENCANA TAHUN 2019

Typhoon / waterspout	1.387
Forest Fire	746
Flasflood / Flood	784
Landslides	719
Drought	123
Earthquake	30
tidal wave / tsunami / abrasion	18
Volcanic Eruption	7

DAMPAK BENCANA PERIODE 1 JAN - 31 DES 2019

- **478** MENINGGAL DUNIA
- **6,1 Juta** MENDERITA & MENGUNGSI
- **111** HILANG
- **3.421** LUKA - LUKA

DAMPAK KERUSAKAN TAHUN 2019

RUMAH RUSAK TOTAL 73.723
- 15.813 RUMAH RUSAK BERAT
- 14.565 RUMAH RUSAK SEDANG
- 43.345 RUMAH RUSAK RINGAN

FASILITAS RUSAK TOTAL 2.024
- 1.123 FASILITAS PENDIDIKAN RUSAK
- 688 FASILITAS PERIBADATAN RUSAK
- 213 FASILITAS KESEHATAN RUSAK

KANTOR & JEMBATAN RUSAK
- 275 KANTOR RUSAK
- 450 JEMBATAN RUSAK

No : 19/B/099/Ben-2019/BNPB/10022020

Disasters in Indonesia - 2019 (BNPB)

BENCANA INDONESIA 2020

BNPB

Sampai tanggal 1 Juli 2020 Pkl. 15.00 WIB, tercatat jumlah kejadian bencana sebanyak 1.557 kejadian. Kejadian bencana alam mendominasi adalah bencana banjir, kemudian diikuti berturut-turut puting beliung dan tanah longsor. Bencana alam menimbulkan terdampak dan mengungsi 2.326.092 jiwa, sedangkan sebanyak 206 jiwa meninggal dan hilang, serta luka-luka 273 jiwa. Selain bencana alam, pada tanggal 14 April 2020 pemerintah menetapkan penyebaran Covid-19 sebagai **Bencana Nasional** non alam.

SEBARAN KEJADIAN BENCANA ALAM 1 JANUARI - 1 JULI 2020

TOTAL BENCANA TAHUN 2020

Periode 1 Januari - 1 Juli 2020

1.557

JUMLAH KEJADIAN PER-JENIS BENCANA TAHUN 2020

BENCANA ALAM	
Flood / flashflood	10
ERUPSI GUNUNGAPI	3
Forest Fire & Drought	142
	1
Flood / flashflood	621
Landslides	332
Typhoon / waterspout	426
tidal wave / tsunami / abrasion	21
BENCANA NON ALAM	
EPIDEMI COVID-19	1

DAMPAK BENCANA ALAM PERIODE 1 JANUARI - 1 JULI 2020

- **198** MENINGGAL DUNIA
- **2.326.092** MENDERITA & MENGUNGSI
- **8** HILANG
- **273** LUKA - LUKA

DAMPAK KERUSAKAN BENCANA ALAM TAHUN 2020

RUMAH RUSAK TOTAL 21.506
- 4.319 RUMAH RUSAK BERAT
- 3.980 RUMAH RUSAK SEDANG
- 13.207 RUMAH RUSAK RINGAN

FASILITAS RUSAK TOTAL 860
- 382 FASILITAS PENDIDIKAN RUSAK
- 430 FASILITAS PERIBADATAN RUSAK
- 48 FASILITAS KESEHATAN RUSAK

KANTOR & JEMBATAN RUSAK
- 67 KANTOR RUSAK
- 219 JEMBATAN RUSAK

DAMPAK BENCANA NON ALAM EPIDEMI COVID-19

- **57.770** KASUS
- **2.934** MENINGGAL DUNIA
- **25.595** SEMBUH

Disasters in Indonesia - 2020 (BNPB)

No : 187/U66/099/Ben-Indonesia/BNPB/01072020

HAZARDS IN INDONESIA

Natural Hazards	Natural hazards are predominantly associated with natural processes and phenomena
Anthropogenic hazards	Human-induced hazards, are induced entirely or predominantly by human activities and choices. This term does not include the occurrence or risk of armed conflicts and other situations of social instability
Socionatural Hazards	associated with a combination of natural and anthropogenic factors, including environmental degradation and climate change
Hazards (Sendai Framework DRR 2015 - 2030)	Geological hazards(geological hazards), dangers of hydrometeorological hazards, biological hazards, technological hazards and decreased environmental degradation High vulnerability of communities, infrastructure and elements within cities/ areas at risk of disaster Low capacity of various components in society

Source: https://www.undrr.org/terminology/hazard

Recent situations : Disasters In Indonesia

IDEP and Partners' Emergency Response Initiatives in 2002-2021

1.Bali Bombing ER & Recovery (2002)
2.Aceh Tsunami ER & Recovery (2004 - 2010)
3.Aceh / North Sumatra flooding ER (2007)
4.Morowali landslides/flooding ER (2009)
5.Bengkulu Earthquakes ER (2010)
6.Tuban, East Java - Floods ER (2009)
7.Dompu, Sumbawa – Earthquake ER (2009)
8.West Sumatra Earthquake and Landslide ER & Recovery (2010 - 2013)
9.Tsunami Mentawai ER (2010)
10.Merapi Eruption, Central Java/Yogyakarta ER & Recovery (2010 - 2012)
11.Sinabung Mount Eruption Recovery Work (2015)
12.Gunung Agung Mount Eruption ER & Recovery (2017)
13.Lombok Earthquake ER & Recovery [on progress fundraising] (2018)
14.PASIGALA Earthquake, Tsunami, Liquefaction ER & Recovery (2018 - now)
15.West Java Tsunami Emergency Response (2018)
16.Maluku Earthquake Emergency Response (2019)
17.Lengkeka Village, Poso, Flash Flood Emergency Response (2020)
18.ER East Nusa Tenggara – Flash flood (2021)

Recent situations : Disasters In Indonesia

The Risk of Spatially and Temporally Isolated Area Caused by Disaster

DAMAGED ROADS AND ACCESS

Various natural disasters in Indonesia always causes road infrastructure to be cut off, as happened after the Tsunami in Aceh in 2004, Liquefaction and Earthquake in Central Sulawesi 2018, and recently in 2020 the landslide in West Java.

NO COMMUNICATION SIGNAL

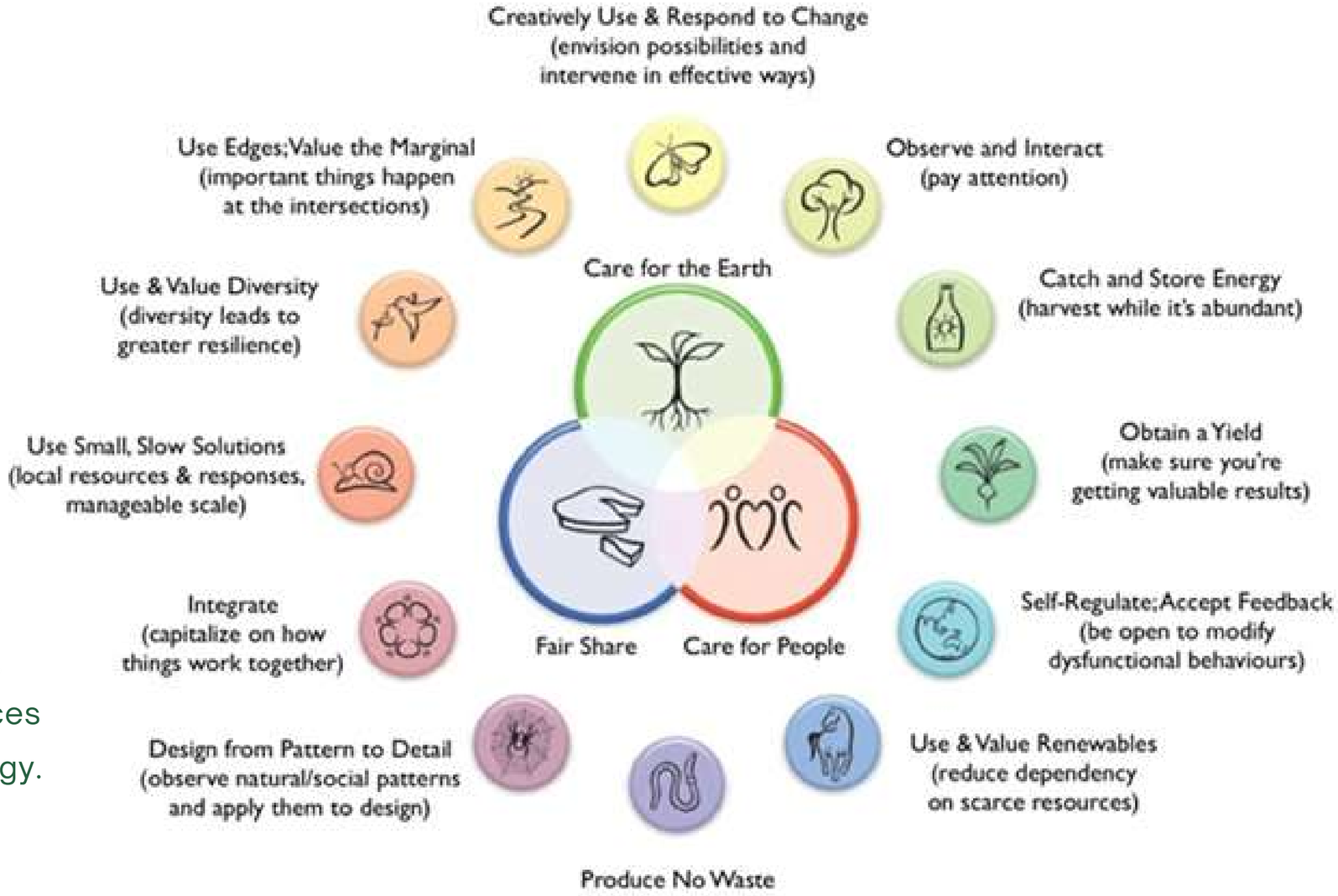
Geopragically, hilly location, leaves many rural areas isolated even without disaster. After the disaster occurred, many realized the importance of conducting community radio (*radio komunitas*) as disaster mitigation

PANDEMIC : SELF-QUARANTINE

With the imposition of restrictions on social activities in Indonesia, many families are unable to carry out livelihood activities, as a result, many need assistance, especially in self-isolation.

IDEP and Permaculture approach

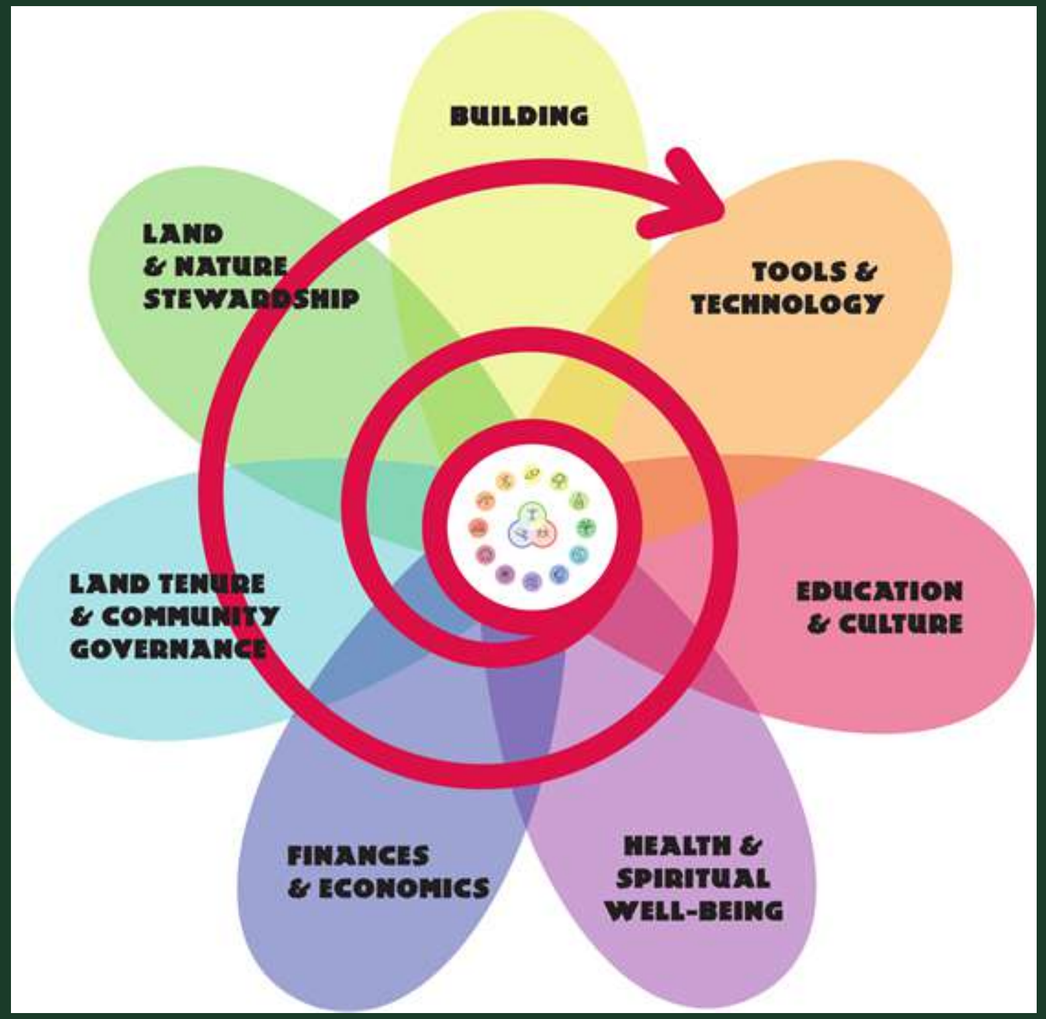
The Permaculture approach applies traditional practices in **natural resource management, integrated with modern technology that is appropriate** and as natural as possible (without synthetic chemicals or genetically modified/hybrid/GMO seeds & seeds). This method works with natural systems, reduces pollution and waste, and produces food and productive crops with low energy. (David Holmgren)



pict: 3 ethics and 12 principles

IDEP AND PERMACULTURE APPROACH FOR DRR

Community Resilience Design : Conceptual Framework for Implementation



1. Culture and education (societal condition and stakeholder identification)
2. Physical and spiritual health (Indigenous and local wisdom)
3. Finance and economics (Sustainable livelihood)
4. Land use and community (community-based mapping and zonation)
5. Protection of land and nature (Conservation for mitigation)
6. Architecture (Conserve energy through design and observation)
7. Tools and technology

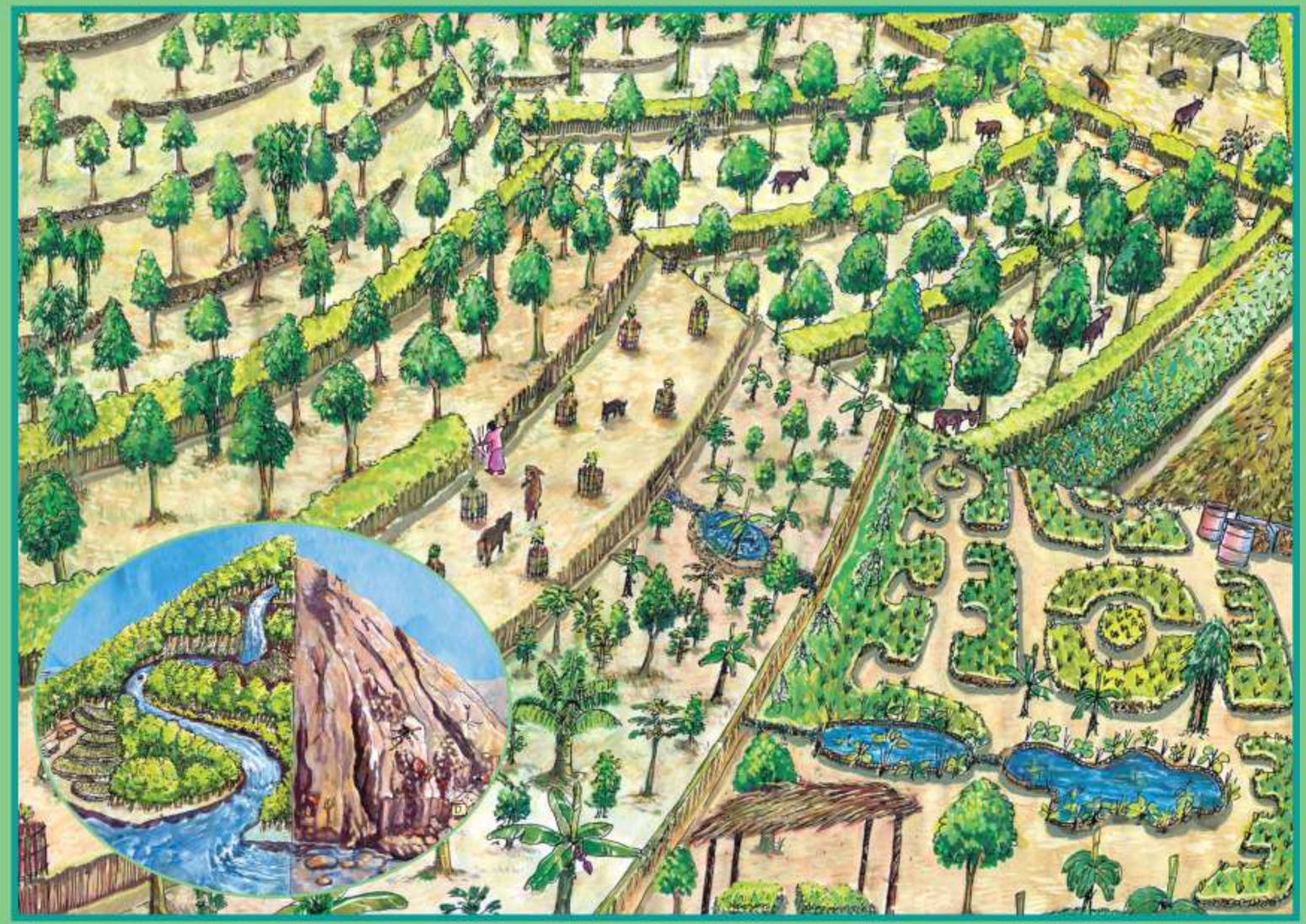
IDEP AND PERMACULTURE APPROACH FOR DRR

Community Resilience Design : Permaculture Zonation

- **Zone 1 includes:** The house, home garden, shower/wash rooms, kitchen, toilet, small animals, seedling nursery, and things which need daily attention.
- **Zone 2 includes:** Home and market gardens, small animal husbandry and large animals that need regular attention, intensive fruit tree systems, and small aquaculture systems.
- **Zone 3 includes:** Larger and lower maintenance fruit tree systems, large animal husbandry, larger crops that require less maintenance, and aquaculture systems.
- **Zone 4 includes:** Large scale system of trees, crops, large animal husbandry, and low maintenance aquaculture systems.
- **Zone 5 includes:** Rivers and wild forest, wild plants that produce food, medicine, timber, protection of the environment including native trees, plants, birds, and animals – it is a place to study natural environmental processes.

IDEP AND PERMACULTURE APPROACH FOR DRR

Community Resilience Design : Reforestation and Tree crops



How you can protect the future

- Tree and bamboo crops provide sustainable products and long term income.
- Tree and bamboo crops hold and protect soil, reduce erosion, and store nutrients in the soil.
- Disaster risks of landslides and flooding are greatly reduced.
- Legume tree terraces improve production, provide nutrients and organic material, prevent erosion, and divide the land for animals.
- Animals can be included in integrated systems and used to manage weeds and provide fertilizer.
- Annual crops can also be integrated in the system.

What future do you choose?

IDEP APPROACH FOR DRR

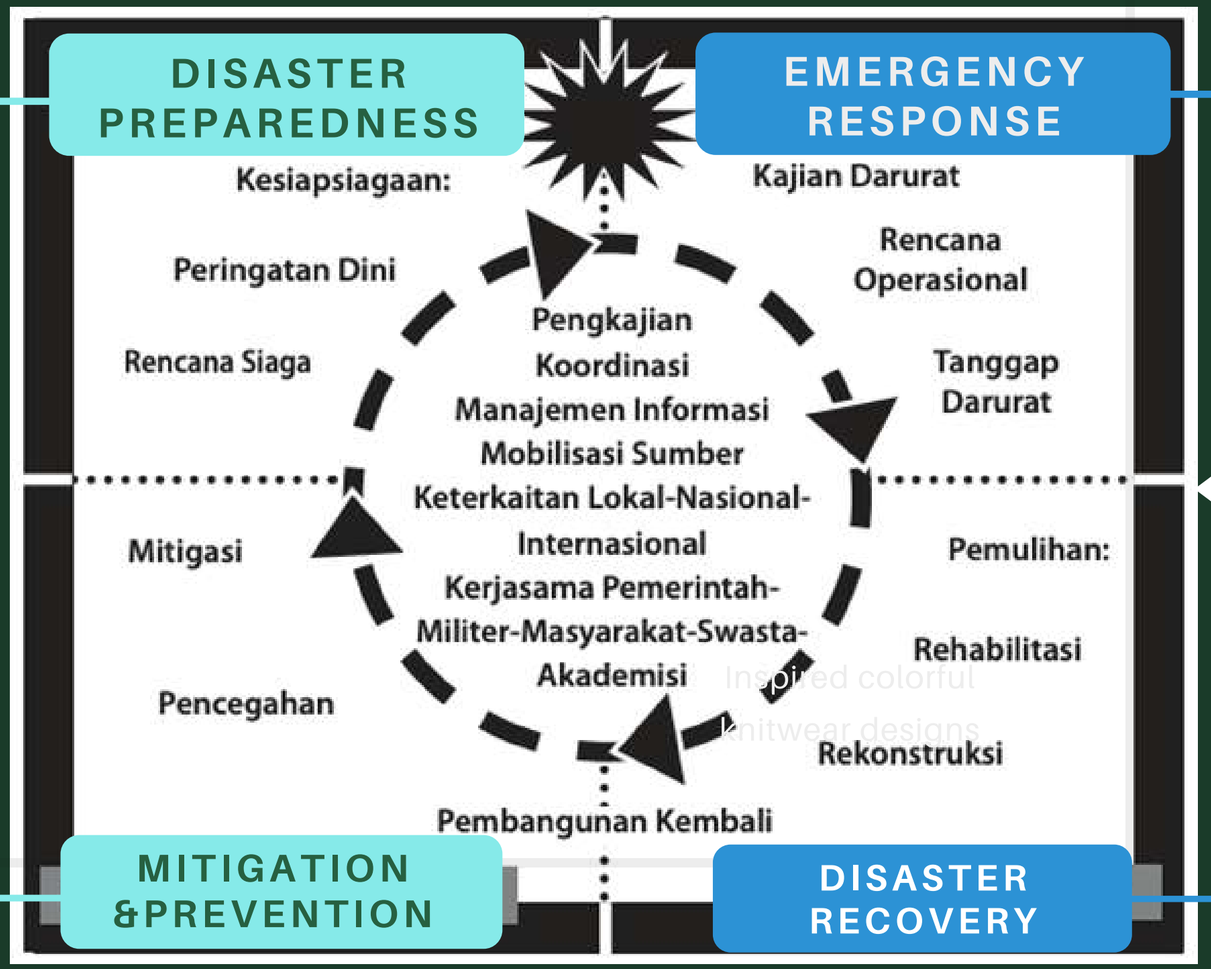
Community Resilience Design : Community-based Disaster Risk Management

- Community Disaster-Risk Mapping
- Stakeholder Advocacy
- School Preparedness program
- CDMG (Community-based Disaster management Group) Training

Components:

- **Early warning system**
- **Disaster Preparedness plan**
- **Mitigation**
- **Prevention**

- Community design & development
- Household-based food security (Home Garden)
- Resource Management
- Conservation Habitat
- Waste & Recycling System



Need Assessment SAR, Medical, WATSAN, food, temporary shelter, reconstruction tools, children's activities) **in partnership with emergency specialists and local partners**

Components:

- **Rapid Assessment**
- **Operational Plan**
- **Emergency response implementation**
- **Recovery and Rehabilitation Plan**
- **Reconstruction**

- Stakeholder advocacy
- Community-based assessment for recovery and sustainable development
- Sustainable (re)development and reconstruction

IDEP & Community-based Disaster Management

LOCALISING DISASTER MITIGATION

In the past, disaster management has generally been the responsibility of government agencies, working alongside local authorities and disaster affected communities. When disasters happen, communities often have to wait a long time for outside assistance to arrive.

CONTEXT-BASED CAPACITY DEVELOPMENT

By being more prepared and knowledgeable about what can be done to mitigate and manage disasters communities can play a key role in ensuring that losses and suffering that may occur are kept to the minimum possible. The first moments following a disaster, can be the most crucial in minimizing disaster impacts.

INCLUSIVE - COMMUNITY ENGAGEMENT

The people that are on site when disaster happens are the community members themselves. With that in mind, and as part of a broader objective to develop community resilience, communities need to be familiar with all aspects of disaster management if they are to take prompt and effective steps before, during and after disaster

IDEP

IDEP and Permaculture approach for DRR

Central Sulawesi
Disaster Recovery and Livelihood
- Transitional home
- Home Garden
- Advocacy
- CDMG Capacity Development

https://www.youtube.com/watch?v=3rVjdIWG0Gg

IDEP

IDEP and Permaculture approach for DRR

https://www.youtube.com/watch?v=VPncAbXJ6qY

Agroforestry in West Bali
- Tree planting (mitigation for drought and flood)
- Biogas (energy)
- Waste Management
- Conservation of endemic trees with Temples

IDEP

More from Us

North Maluku

Sustainable Livelihood and Agroforestry for Conservation of Biodiversity in Aketajawe National Park Terrestrial Corridor

Green Talaud

Conservation and Environmental Rehabilitation

Climate Adaptation

Home garden for food security and Nutrition

More from Us

https://youtu.be/T1a8KH35WUI

Contact US

IDEP

OFFICE & DEMOSITE :

BR. MEDAHAN, DESA KEMENUH, SUKAWATI, GIANYAR 80582,
BALI – INDONESIA |TELP/FAX +62-361 908 2983|
INFO@IDEPFOUNDATION.ORG |WWW.IDEPFOUNDATION.ORG

Instagram :@idepfoundation

: IDEP Foundation