



IN CASE OF
TSUNAMI
PLEASE GO TO
HIGH GROUND
OR INLAND



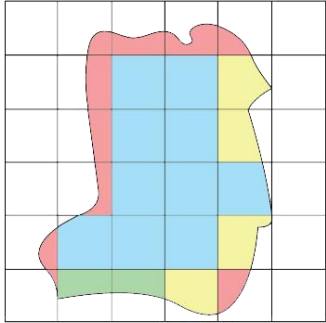
Lessons Tsunami Ready in Indonesia (on going)

ICG/IOTWMS 13th Meeting
28 November – 2 December 2022

Ardito M. KODIJAT
IOTIC – UNESCO/IOC
a.kodijat@unesco.org

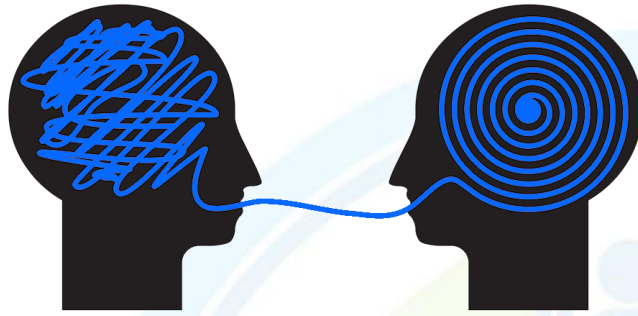


General



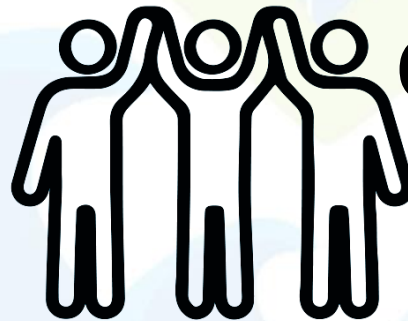
Geographical Area

Village level → Desa - Kelurahan



Understanding of the Tsunami Ready Recognition Programme

The Background, Concept, and the Objectives



Champions

- Community DRR Organizations (FPRB – FKDM – KSB – GMLS)
- Individuals



Support System

- BMKG (National and Local) - SLG
- BPBD (District and Province)
- Collaborators (U-INSPIRE, Universities, NGO, etc.)

Existing Programmes



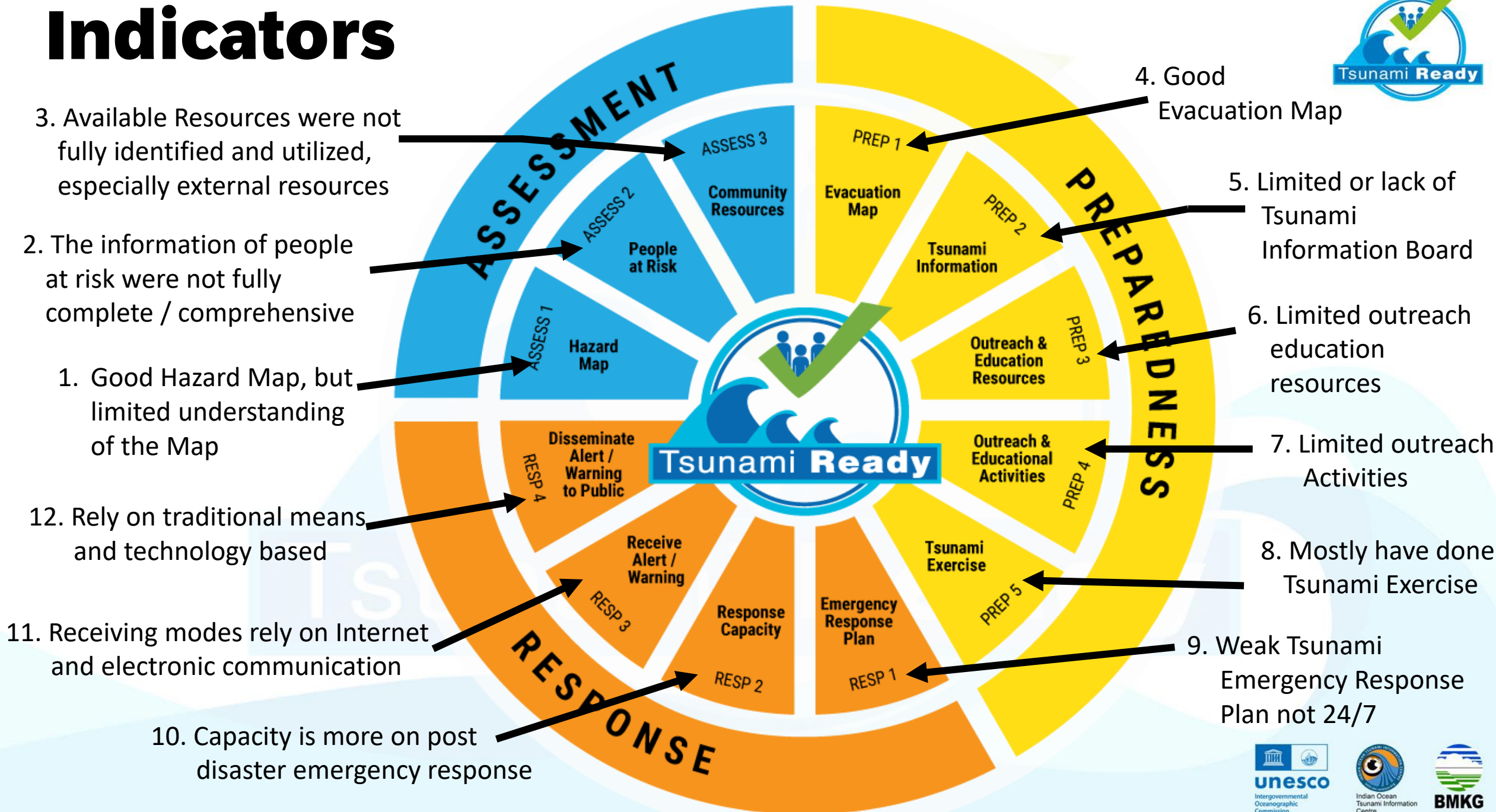
- Cyclones Preparedness
- Disaster Resilient Village (DESTANA)
- Sekolah Lapang Gempa

Urgency → Priority → Strategy

National DMO Programme → Disaster Resilient Village

	No Intervention	Basic 20 Indicators	Intermediate 40 Indicators	Advanced 60 Indicators
Tsunami Risk → Ina Risk	High	High Priority – Urgent Implement Tsunami Ready	High Priority – Urgent Implement Tsunami Ready	Medium Priority to implement Tsunami Ready
	Medium	High Priority – Urgent Implement Tsunami Ready	High Priority – Urgent Implement Tsunami Ready	Least Priority
	Low	Medium Priority to implement Tsunami Ready	Medium Priority to implement Tsunami Ready	Least Priority

Indicators



Rural Community



OUR VILLAGE

Our village Nollasahi is situated at 500 meters away from the sea coast in Gadsharshpur Gram Panchayat under Erasama Block of Jagattinghpur District. The total population of our village is 515 and total house hold is 130. Our village is located at low lying area surrounded by sea at one side by forest at other side. Most of our villagers are engaged in fishing and they use to venture in to deep sea for fishing throughout the year.



Our Interesting ASSESSMENT INDICATORS

Our village Nollasahi has achieved all the indicators as prescribed in the Indian Ocean Tsunami Ready Programme. Our village is having a Tsunami Management Plan, Early Warning Dissemination System (Alert Siren) towers, Evacuation Maps, Safe Shelter for evacuation and all other Indicators for Tsunami Ready Programme.

Our Interesting PREPAREDNESS INDICATORS

Our Village is a well-prepared village with respect to Tsunami. Our village has identified designated evacuation route and designated safe shelter for evacuation. The community have prepared a Tsunami Management Plan which will be helpful in managing Tsunami. Evacuation drills are being conducted in our village on regular intervals. Each and every individual of our community including school children are sensitized and are aware on Tsunami. Our village is having trained community level volunteers "Aapada Mitra" who act as first responder during Tsunami.



Our Interesting RESPOND INDICATORS

For dissemination of early warnings on Tsunami to the community of our village Nollasahi, there is an early warning communication system in place in the form of an alert siren tower that is installed on the roof top of Cyclone Shelter situated in our village. The villagers can receive information from the district and block emergency operation centers. The villagers have their own system of early warning with in the village.



OUR VILLAGE

Our village Venkatraipur is situated at 247 meters away from the sea coast at 19° 14' 57" longitude and 84° 53' 35" latitude in Botipalli Gram Panchayat under Rangefunda Block of Ganjam District. Total population of our village is 2040 and total house hold is 497. One side of our village is surrounded by casuarina forest. Most of our villagers are engaged in fishing and they use to venture in to deep sea for fishing throughout the year.



Our Interesting ASSESSMENT INDICATORS

Our village meets all the parameters as indicated in the Indian Ocean Tsunami Ready Programme (IOTR). The Tsunami Readiness of our village was assessed by the members of National Board for Tsunami Ready in the year 2019. We are well prepared to face any eventuality caused by Tsunami.

Our Interesting PREPAREDNESS INDICATORS

We are a prepared community with respect to Tsunami. We have identified designated evacuation route and designated safe shelter for evacuation. We have a Tsunami Management Plan which will be helpful in managing Tsunami. We conduct evacuation drills on regular intervals. Each and every individual of our community is sensitized and aware on Tsunami. We have trained community level volunteers who act as first responder during Tsunami.



Our Interesting RESPOND INDICATORS

For dissemination of early warnings on Tsunami to our community, we have an early warning communication system. We can receive early warning through the alert siren tower installed on the roof top of Cyclone Shelter situated in our village. We can receive information from the district and Block Emergency Operation Centres.



OUR VILLAGE

Tambakrejo is one of the villages in Sumbermanjing Wetan District, Malang Regency, which is located on the south coast of Java Island. In 1994, Tambakrejo, especially Tamban Hamlet, once experienced a tsunami which was the result of the tsunami that occurred in Banyuwangi. A tsunami as high as approximately 3 m hit Tamban beach. Parts of the village were ravaged by the tsunami, there were no casualties at that time. Based on the tsunami modeling by BMKG that triggered by the M8.7 megathrust earthquake in South Java, Tambakrejo was threatened by a tsunami with a height of 18-22 m when it arrived 20 minutes after the earthquake. The total number of people threatened by this potential is 6519 people. From this history & potential threats, villagers are aware about tsunami disaster preparedness.



Our Interesting ASSESSMENT INDICATORS

As awareness of local residents to the potential of tsunami hazard, 2 residents of Tambakrejo village donated part of their agricultural land to be used as an evacuation route. Mr. Hari Widodo and Mrs. Misyem, who consciously donated part of their agricultural land to be used as an evacuation route. This awareness from residents received a positive response from village officials and the district government by committing to build this evacuation route permanently.

Our Interesting PREPAREDNESS INDICATORS

Socializations, trainings and simulations are carried out regularly by FPRB Tambakrejo supported by BPBD, BMKG, and TNI-Polri (National Guard-Police) at least one a year. These activities are to maintain and increase the community preparedness for a potential tsunami on the South coast of Java. And also every month on 26th a siren test is carried out in Tambakrejo village, as part of the BMKG's national activity to commemorate the December 26, 2004 Aceh tsunami.



Our Interesting RESPOND INDICATORS

The Tambakrejo's FPRB has prepared a disaster contingency plan document which is routinely tested with disaster emergency response simulations and is continuously updated according to the available resources in this village. Training and simulations are carried out independently or with other institutions/organizations such as the TNI-Polri (National Guard/Police), PMI (Indonesian Red Cross), BPBD (Local Disaster Agency), BNPB (National Disaster Agency), BASARNAS (National Search and Rescue Agency) and BMKG (Meteorological, Climatological and Geophysical Agency).

OUR COLLABORATORS

In dealing with the potential for an Earthquake-Tsunami disaster, Tambakrejo has received support from the TNI-Polri (National Guard/Police), PMI (Indonesian Red Cross), BPBD (Local Disaster Agency), BNPB (National Disaster Agency), BASARNAS (National Search and Rescue Agency) and BMKG (Meteorological, Climatological and Geophysical Agency). TNI has several times carried out reforestation, disaster simulation. And the TNI-AL specifically fosters the coastal communities of Malang Regency by forming PSR (South Coast Rescue).



Strategic Infrastructure

KUTA MANDALIKA VILLAGE TSUNAMI READY

OUR VILLAGE

The Mandalika Super Priority Tourism Destination (DPS) was chosen by the Indonesian government which is in the Kuta Village area. Kuta Village is located in Central Lombok Regency, West Nusa Tenggara Province where geographically it is perpendicular to the Megathrust Zone which makes it an active area for earthquakes with a potential for a tsunami. Based on the Tsunami modeling conducted by BMKG using the worst scenario M = 8.5 (PUSGEN, 2017) the tsunami waves are expected to arrive within 26 minutes with a tsunami inundation ranging from 14-18 meters and can reach 2-3 km inland to Kuta Village. Referring to the tsunami hazard map, there are 9 hamlets in the Tsunami Prone Zone, namely Hamlet Ebanut, Ujung Lauk, Rangkep I, Ketapang, Kuta I, Kuta II, Kuta III, Mengalung, and Batu Ritu with an estimated total population of 4,456 people (Based on Population data August, 2022).

Our Interesting ASSESSMENT INDICATORS

A number of updates have been made to the Kuta Village tsunami hazard map. In 2015, 2019 and 2021. A worst-case scenario with a magnitude of 8.5, an estimated arrival time for the tsunami waves, and an anticipated tsunami inundation are all used in the most recent tsunami hazard map. Our Tsunami Hazard Map may now be accessed online by a barcode, making it more publicly accessible. At the Mandalika Super Priority Tourism Destination (DPS) in Kuta Village, Central Lombok Regency, the Provincial Government of West Nusa Tenggara also has a contingency plan for earthquakes and tsunamis.

Our Interesting PREPAREDNESS INDICATORS

In order to know where the tsunami temporary evacuation site is, how far it is from our location, and how long it will take to get there, we can use QR - Kongsina Desta, a platform for distributing educational materials about earthquakes and tsunamis, tsunami hazard and evacuation maps, and the Distribution of Temporary Tsunami Evacuation Sites. The Mandalika Circuit and the Hotel Area both seem to have Tsunami Information Boards built to support in the implementation of international events.

Our Interesting RESPON INDICATORS

If a major earthquake with a tsunami potential hits Central Lombok Regency's southern coast at "Warning - Slags" or "Major Warning - Awas" levels. The Tsunami Siren will then sound from the Central Lombok (BPBD) Operations Control Center (PusatKoki) as an order to evacuate, under the guidance of the Regional Leader (Regent). The Kuta Village tsunami siren, which is integrated, will sound via radio frequency (Rukit Banjar Tsunami Siren, Bukit CWT Tsunami Siren, Community-based Tsunami Siren in the Muchola of Kuta Village, and all communication radios in Kuta Village will receive the sound of sirens tsunami at a frequency of 171.3 MHz).

OUR COLLABORATORS

Good collaboration has been established from the Village Government, BPBD of West Nusa Tenggara Provincial, BPBD of Central Lombok Regency, Regional Social Service, BMKG, Mataram University, ITDC Mandalika, and Hotel Managers in the Mandalika Area in building community resilience and preparedness for the impacts arising from disasters earthquakes and tsunamis. The commitment continues to be increased to always be together, build and increase capacity for the international class Kuta-Mandalika Village.

GP Racing Track

GLAGAH VILLAGE TSUNAMI READY

OUR VILLAGE

Glagah is one of the cultural villages in Kulon Progo district which has several tourist objects, such as the beach, the Sidorejo Stupa site, the Puro Pakualan Pesanggrahan, and the Buk Abang bridge heritage. The village is also famous for cultural activities including the Arak-Arak Gununggang festival, wayang kulit, traditional dancing, Adu Gongso festival, and Labuhan festival. Yogyakarta International Airport (YIA) located in the Glagah Village. The airport makes the village the gateway for domestic and foreign tourists to Yogyakarta. Besides these tourism potentials, the region has the threat of a tsunami disaster in the future due to the existence of a megathrust zone. The historical record shows evidence of the past tsunami that occurred in the village.

Our Interesting ASSESSMENT INDICATORS

Yogyakarta International Airport (YIA) was built with an Mw8.8 earthquake-resistant building structure and is the only airport in Indonesia and ASEAN that has been equipped with a Tsunami Early Warning (BMKG) system and become a Vertical Evacuation Place for the airport and the community. There are 3 evacuation places, the YIA administration building, the Crisis Center building, and the terminal building, which can accommodate more than 20,000 people. The evacuation sites are easily accessible by the community through emergency doors. This airport is also protected by the existence of australian pine adjacent to the coast as a tsunami barrier.

Our Interesting PREPAREDNESS INDICATORS

Glagah has tsunami evacuation map developed jointly with BPBD, FPBB, KSIB, YIA, and BMKG. The map is placed in a public area and disseminated through various media. The Glagah community has increased its capacity through different activities among other Field School of Earthquake organized by BMKG and strengthening of the FPBB capacity by BPBD, and management training by the office of Social Affairs. The community conducted regular tsunami drills not only the one organized by BPBD, YIA, but also independently.

Our Interesting RESPON INDICATORS

The community able to receive and disseminate tsunami early warning information 24/7 through various modes of information. The FPBB will receive the information through the Warning Receiver System New Generation (WRSNG) in YIA, BPBD Kulon Progo, YIA Meteorological Station, and District Command Center. The FPBB also receive information from the InfoBMKG mobile application, the WRS mobile application, and from the Local DMO through the tsunami warning application (Sintal) and the BMKG tsunami siren. As soon as they receive the information, they disseminate to the public through "kentanggan", mosques' megaphone, and social media, and radio communication. The "kentanggan", has certain code of sound that is agreed by the community, the kentongan will be sounded throughout the region.

OUR COLLABORATORS

The synergy between the community, BPBD Kulon Progo, Satlimas Yogyakarta, PT Angkasa Pura I, and other stakeholders has strengthened the tsunami preparedness in Glagah. This synergy is built the Tsunami Ready program which lead to the national recognition from the National Tsunami Ready Board of Indonesia and expecting the international recognition by UNESCO-IOC.

International Airport

Community with Tourism



PANGANDARAN VILLAGE TSUNAMI READY

OUR VILLAGE

Pangandaran is a top-rated beach holiday destination. It is estimated that the total number of visitors annually can be up to 2,516,000. Pangandaran Beach which is the hope of a bay makes two different parts of the beach, the east coast to enjoy Sun, Sea and the West Coast to enjoy Sun Set. Pangandaran Village experienced tsunami on September 11, 1931 (M7.5) and July 11, 2006 (M7.7). With this in mind, tsunami preparedness need continue to be strengthened through studies, policies, structure and infrastructure equipment, and community capacity.

Our Interesting ASSESSMENT INDICATORS

The Pangandaran Village has tsunami evacuation shelters located in the tourist market and the Pangandaran Grand Mosque. Five hotels, the Horizon Hotel, Last Biru Hotel, Hotel Elita, Pantai Indah Hotel, and Fortuna Hotel have Memorandum of Understanding (MOU) with the village government as tsunami evacuation places. In addition, Pangandaran also has natural reserve that is regarded as natural evacuation site with a capacity for approximately 10,000 people.

Our Interesting PREPAREDNESS INDICATORS

The Pangandaran Village is a tour site area. The tour guides in Pangandaran are trained on preparedness and rescue with the support of the Disaster Youth and SEA agency in addition, the DISKIP Disaster Management Agency and the Indonesian Hotel and Restaurant Association (ADR) training on disaster-resilient for hotel and catering.

Our Interesting RESPONSE INDICATORS

Pangandaran has an advanced command center that operated 24/7 by the member of the Pangandaran Community Preparedness Forum (PKDM). A Web-based New Generation Early Warning Receiver System (NINGS) of BMKG is installed in the Command Center. The command center also implement the smart poles connected with Infolights and LED located at four locations in Pangandaran Village East Coast, West Coast, Tourist Market, and the Pangandaran Village Office, with additional capacity to monitor sea level rise. Warning dissemination on tsunami alert is also done through the smart poles.

OUR COLLABORATORS

The Pangandaran Community Preparedness Forum (PKDM) collaborates with various government and private agencies among others The Agency of Meteorology, Climatology and Geophysics (BMKG), Indonesian National Disaster Management Agency (BNP), BPRD Pangandaran Regency, National Research and Innovation (BRIN), and UINIRIP Indonesia.

KUTA MANDALIKA VILLAGE TSUNAMI READY

OUR VILLAGE

The MandaliKa Super Priority Tourism Destination (DPSPT) was chosen by the Indonesian government which is in the Kuta Village area, Kuta Province, with an area of 1,737.3 km² and 523.2 population residents (census data in 2021). The Village is located in a relatively low-land area surrounded by the sea on the east, north, and west side. The highest points are in the center of the peninsula with approximately 3.5 m above sea level, the distance from east to west is approximately 800 m and from north to south is 1.6 km. Tanjung Benoa is one of the tourist destinations in Bali which is well known for water sport activities. However, behind the beauty of the beaches, Tanjung Benoa Village is tsunami prone area due to the existence of the Megathrust Zone as the earthquake source in the south of Bali.

Our Interesting ASSESSMENT INDICATORS

A number of updates have been made to the Kuta Village tsunami hazard map. In 2015, 2019 and 2021. A worst-case scenario with a magnitude of 8.5, an estimated arrival time for the tsunami waves, and an anticipated tsunami inundation are all used in the most recent tsunami hazard map. Our Tsunami Hazard Map may now be accessed online by a barcode, making it more publicly accessible. At the MandaliKa Super Priority Tourism Destination (DPSPT) in Kuta Village, Central Lombok Regency, the Provincial Government of West Nusa Tenggara also has a contingency plan for earthquakes and tsunamis.

Our Interesting PREPAREDNESS INDICATORS

In order to know where the tsunami evacuation site is, how far it is from our location, and how long it will take to get there, we can use QR - Komana Dista, a platform for distributing educational materials about earthquakes and tsunamis, tsunami hazard and evacuation maps, and the Distribution of Temporary Tsunami Education Sites. The MandaliKa Cruise and the Hotel Area both seem to have Tsunami Information Boards built to support in the implementation of international events.

Our Interesting RESPONSE INDICATORS

If a major earthquake with a tsunami potential hits Central Lombok Regency's southern coast at Warning - "Sagur" or Major Warning - "Asur" level, The Tsunami Siren will sound from the Central Lombok BPRD Operations Control Center (Pusat) as an order to evacuate, under the guidance of the Regional Leader. The Kuta Village tsunami siren, which is integrated with frequency walk-talker Tsunami Siren, Bulk GWT Tsunami Siren, Community-based Tsunami Siren in the Mushola of Kuta Village, and all communication radio in Kuta Village will receive the sound of siren tsunami at a frequency of 171.3 MHz.

OUR COLLABORATORS

Good collaboration has been established from the Village Government, BPRD of West Nusa Tenggara Provincial, BPRD of Central Lombok Regency, Regional Social Service, BMKG, Mataram University, PTIC MandaliKa, and Hotel Managers in the MandaliKa Area in building Community resilience and preparedness for the impacts arising from disaster earthquakes and tsunamis. The commitment continues to be increased to always together, build and increase capacity for the international class Kuta MandaliKa Village.

TANJUNG BENOA VILLAGE TSUNAMI READY

OUR VILLAGE

Tanjung Benoa Village is a peninsula located in the south of the island of Bali. Tanjung Benoa Village is located in a relatively low-land and flat area surrounded by beautiful beaches. As a tourist destination in Bali, the number of tourists visited the Tanjung Benoa Village was approximately 1800 (normal season) to 2000 (peak season) people daily. Tanjung Benoa Village authority signed corporate agreement with 7 out of the 10 hotels to support the disaster preparedness and management. The agreement specified the support for disaster risk reduction and allowing to use the hotel buildings as temporary evacuation sites assembly even in the event of a tsunami incident.

Our Interesting ASSESSMENT INDICATORS

Tanjung Benoa Village is a densely populated area which located in a relatively low-land and flat area surrounded by beautiful beaches. As a tourist destination in Bali, the number of tourists visited the Tanjung Benoa Village was approximately 1800 (normal season) to 2000 (peak season) people daily. Tanjung Benoa Village authority signed corporate agreement with 7 out of the 10 hotels to support the disaster preparedness and management. The agreement specified the support for disaster risk reduction and allowing to use the hotel buildings as temporary evacuation sites assembly even in the event of a tsunami incident.

Our Interesting PREPAREDNESS INDICATORS

The assessment of tsunami hazard potential is not only introduced through the local community in Tanjung Benoa, but also in the schools. Education and preparedness activities become one of the annual routine agendas in the introduction of the school environment for new students in Elementary School Tanjung Benoa (SDN 01) and SDN 02 Tanjung Benoa and Junior High School (SMPN 3) Kuta Selatan. The routine annual tsunami drill agenda is listed in the school's annual curricular.

Our Interesting RESPONSE INDICATORS

As a tsunami ready community, Tanjung Benoa Village has several reliable equipments to disseminate tsunami warnings to all of its members. "Kul Kul" is one of the traditional communication tools made of wood and sounded by hitting. In the absence of electricity during the disaster, "Kul Kul" can be one of the reliable-disseminating warning tool. The message or warning delivered is based on the rhythm of beating the "Kul Kul" which has been agreed upon by the community.

OUR COLLABORATORS

The results we achieve in building tsunami disaster resilient community are only possible through partnership. We collaborate with different institutions, organizations, and companies in the regional, national, and international level to reach our goals. We are grateful for this backing.

KEMADANG VILLAGE TSUNAMI READY

OUR VILLAGE

Kemadang Village is a culturally independent village that emphasizes development with its social and cultural concepts. With the framework of cultural preservation, all design and development, from its tourism, craft potential of fabric, food and Malabar Respiration, must be within the cultural preservation of the Kemadang Village. Cultural preservation in Kemadang includes cultural tourism, customs, culture, history language, social dancing, and cultural heritage. Kemadang is a development area of Mount Satrio with an altitude of 1300 meters above sea level. In addition to the Forest Park Hills and a part of the Gunung Irena (PESICO) Cultural Complex. Another natural potential of Kemadang Village is the existence of several beaches which are one of the tourist destinations with up to 1800 visitors every day. The people of Kemadang are developing fishing boats and sail collaboration in helping beach, as well as developing sea shell crafts. The location of Kemadang is in the southern part of Dauh Idrarna together and directly adjacent to the Indian Ocean where there is a neighborhood zone, so that the Kemadang Village area is prone to earthquakes and tsunamis. Therefore, tsunami disaster mitigation is absolutely necessary to increase disaster.

Our Interesting ASSESSMENT INDICATORS

The Kemadang Tsunami Hazard Map has been installed at Kemadang Village Office, while the Tsunami Evacuation Map has been installed in Kuban and Benoa Beach area. The map was created by the BMKG in collaboration with the Gununggati DPSPT and the Kemadang Disaster Risk Reduction Forum (FRPD) by conducting evacuation route inspections to 17 Temporary Evacuation Order (TES) scattered on the hills around the coast. Usually the TES can accommodate thousands people. Kemadang Village has started to involve opened beaches located around the beach to be used as a temporary evacuation sites for event of a tsunami disaster in Kemadang Village there is also a Disaster Preparedness School, named SMA N Kemadang as well as the Third Evacuation Order only ready to be building, a 4 dorms through the teaching and learning process.

Our Interesting PREPAREDNESS INDICATORS

The Kemadang Village community has conducted annual Tsunami DRs involving local residents and tourism operators. In 2018, Kemadang Village has conducted annual Tsunami Disaster Preparedness Village Competition with the theme Earthquake and Tsunami Day (PBB Kemadang) is also active in conducting educational activities including disaster training, disaster preparedness, and event stakeholders, as well as preparing an evacuation route from the beach to TES. Educational materials about the earthquake and tsunami have also been disseminated through various promotional media. PBB Kemadang also independently prepared evacuation signs that were installed around the coast in effort to mitigate the tsunami disaster.

Our Interesting RESPONSE INDICATORS

The Tsunami Ready Community establishment in Kemadang Village is a collaboration between the BMKG (Inter-agency Disaster), BPRD Gununggati, Kemadang Village Government and other stakeholders in Kemadang who are committed for reducing the risk of a tsunami disaster to zero victims. In early 2022, Kemadang has received national level Tsunami Ready recognition by the Indonesian National Tsunami Ready Board and is working to gain international level Tsunami Ready recognition by the UNESCO IOC.

OUR COLLABORATORS

Non-staying
Tourists

Collaboration with
Hotels

Staying Tourists





PANGGARANGAN VILLAGE TSUNAMI READY

OUR VILLAGE
Panggarangan Village is one of the villages in Panggarangan District, Lebak Regency, Banten Province. What makes it to be of great concern is that Panggarangan Village is categorized as prone to tectonic earthquakes and has the potential to cause a tsunami. Head of BMKG, Prof. dr. Dwikorita Kanawati, M.Sc., Ph.D, explained that the earthquake in this area occurred due to megathrust subduction activity in South Banten which has the potential to cause a strong earthquake that can be accompanied by a tsunami. This village with an area of 799.8 hectares has 4,161 inhabitants. Existing historical traces need to be re-excavated and analyzed carefully to strengthen concrete steps in mitigation and preparedness to save the lives of these people.

Our Interesting ASSESSMENT INDICATORS
Gugur Miligisi Lebak Selatan (GMLS) has a vital role as an initiator and driving force for the community in preparation for tsunami ready in Panggarangan village. In addition, one of the unique characteristics of Panggarangan village is individual initiative based on local wisdom, led by Abah Lela (founder of GMLS), who is widely applied in disaster risk reduction. The active participation of the community in various mitigation and preparedness activities, the existence of Gugur Miligisi Lebak Selatan (GMLS), and assistance from various parties (BMKG, ITS, BRIN, U-Inspire, The University, etc.) are expected to add value and strengthen the community in Panggarangan Village. The tsunami hazard map had been verified in the field with community involvement.

Our Interesting PREPAREDNESS INDICATORS
GLMS, in collaboration with BMKG, UIN, ITS, U-INSPIRE and KIDZSMILE, provides educational materials and conducts outreach about the earthquake and tsunami to people in Panggarangan Village. These materials are distributed through various modes, such as screen printed media (t-shirts, calendars, posters, and mugs), door-to-door socialization, storytelling modules based on local wisdom, school information boards, public facilities, and social media.

Our Interesting RESPONSES INDICATORS
Panggarangan village already has a command center, which is led for mitigation and coordination activities between RAPI, GMLS, and GEMAS 24 hours a day, seven days a week. The command center is not only a place for the volunteer community but is also used as an assembly point. Besides being equipped with a disaster warning receiver system of the new generation (WRS-NG) to receive earthquake information and tsunami early warnings, the command center is also equipped with a village self-help siren and a radio-amplifier.

OUR COLLABORATORS
Pilotage Tsunami Ready in Panggarangan Village, Panggarangan District, Lebak Regency is a multi-scale program initiated by the South Lebak Mitigation Group community, which later became a hub among other stakeholders elements that support this activity, namely: government: Bantul, BNPB, Kodam III Siliwangi, Korem 064/Maulana Yusuf, and Pangkajene TNI Angkatan Laut; academic: Institut Teknologi Bandung (ITS) and Universitas Multimedia Nusantara (UMN); community: U-Inspire Indonesia, KidzSmile Foundation, Radio Antar Penderita Indonesia, id Flow Stories, Indonesia Offroad Federation, Sky Volunteer, Bener Dev, Siagabencana.com, and DMC; Donor: Dhuafa, media: PT Radar Banten; business: PT Zentis Era Utama Services, SGM, Maslahat, Predika, PT PLN UPT Cilegon, PT Angkasa Pura II, and PT Suveyar Indonesia.



Collaboration



TANJUNG BENOA VILLAGE TSUNAMI READY

OUR VILLAGE
Tanjung Benoa Village is a peninsula located in the south of the island of Bali. Tanjung Benoa Village is located in the Badung Regency, Bali Province, with an area of 1,7375 km² and 5,832 population residents (census data in 2011). The village is located in a relatively low-land area surrounded by the sea on the east, north, and west side. The highest points are in the center of the peninsula with approximately 3.5 m above sea level, the distance from east to west is approximately 800 m and from north to south is 1.6 km. Tanjung Benoa is one of the tourist destinations in Bali which is well-known for water-sport activities. However, behind the beauty of the beaches, Tanjung Benoa Village is tsunami prone area due to the existence of the Megathrust Zone as the earthquake source in the south of Bali.

Our Interesting ASSESSMENT INDICATORS
Tanjung Benoa Village is a densely populated area which located in a relatively low-land and flat area surrounded by beautiful beaches. As a tourist destination in Bali, the number of tourists visited the Tanjung Benoa Village was approximately 1800 (normal season) to 2000 (peak season) people daily. Tanjung Benoa Village authority signed corporate agreement with 7 out of the 10 hotels to support the disaster preparedness and management. The agreement specified the support for disaster risk reduction and allowing to use the hotel buildings as temporary evacuation sites/assembly areas in the event of a tsunami incident.

Our Interesting PREPAREDNESS INDICATORS
The awareness of tsunami hazard potential is not only introduced through the local community in Tanjung Benoa, but also in the schools. Education and preparedness activities become one of the annual routine agendas in the introduction of the school environment for new students in Elementary School Tanjung Benoa (SDN 01 and SDN 02 Tanjung Benoa) and Junior High School (SMP 3 Kuta Selatan). The routine annual tsunami drill agenda is listed in the school's annual curriculum.

Our Interesting RESPONSES INDICATORS
As a tsunami ready community, Tanjung Benoa Village has several reliable equipments to disseminate tsunami warnings to all of its members. 'Kul Kul' is one of the traditional communication tools made of wood and sounded by hitting. In the absence of electricity during the disaster, 'Kul Kul' can be one of the reliable dissemination warning tool. The message or warning delivered is based on the rhythm of beating the 'Kul Kul' which has been agreed upon by the community.

OUR COLLABORATORS
The results we achieve in building tsunami disaster resilient community are only possible through partnership. We collaborate with different institutions, organizations, and companies in the regional, national, and international level to reach our goals. We are grateful for their backing.



Thank You



Ardito M. KODIJAT

a.kodijat@unesco.org

Indian Ocean Tsunami Information Centre (IOTIC) of UNECSO-IOC
Disaster Risk Reduction and Tsunami Information Unit
UNESCO Jakarta Office



iotic.ioc-unesco.org
www.iotsunami.net
www.iotsunami.info
www.iotsunami.org



facebook.com/iotsunami



[@iotsunami](https://twitter.com/iotsunami)



youtube.com/iotsunami



iotic@unesco.org

Tsunami Ready

