

Capacity Building in Local Communities

German-Indonesian Cooperation for Tsunami Early Warning System

GITEWS Review |

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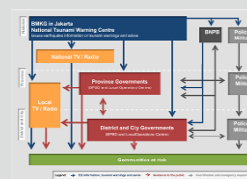
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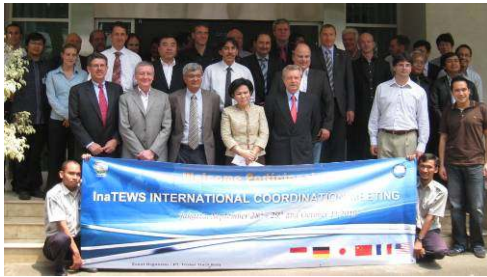
Editorial

After four years of intensive cooperation in three pilot areas, the GITEWS Project “Capacity Building in Local Communities” is now preparing to close down. It is also a moment to look back and evaluate what has been achieved, what worked and what didn't.

The GITEWS Review provided the first opportunity for this. At the end of September, a group of international experts evaluated the technical concept and implementation of the overall GITEWS project. One day of this review was dedicated to the processes and results in the Bali Pilot Area. Together with our partners we are now going to assess systematically the achievements in each of the pilot areas by applying the Checklist – a monitoring tool we developed during the early stage of the project. This process will not only provide us with information what has been accomplished, but also help us identify fields for further improvements.

Final workshops in all pilot areas will be held to discuss the findings from the evaluations and the way ahead. These workshops will also be a platform to provide updates on the latest developments of InaTEWS and to share experiences from the pilot areas with representatives from other tsunami prone districts along the Indian Ocean coastlines of Indonesia. On this occasion we will also launch the “TSUNAMIKit”, which compiles experiences from four years of capacity building and aims to support communities and their governments to get better prepared. For further details take a look inside this edition of the newsletter.

Best regards
Harald Spahn, Team Leader GTZ-IS



Participants of the GITEWS Review in Jakarta, 28th September 2010 / Visiting the Tsunami Warning Center at BMKG

GITEWS Review – at BMKG in Jakarta

In response to a call by the German Federal Ministry for Education and Research (BMBF) for the evaluation of the results of the GITEWS project, which was designed to deliver core elements for a tsunami early warning system for Indonesia and other endangered Indian Ocean rim countries, a review took place on 28-30 September in Jakarta and the GITEWS Pilot Area Bali.

The main target audience for the results of the peer review is the German Parliament and the BMBF. In addition, this review should also serve as a guideline for future developments in Indonesia as well with regard to the Indian Ocean area.

During the review the following questions were addressed:

1. Are the system strategy and components adequate to cope with the Indonesian challenge of near field tsunami and short warning times?
2. How are the innovations of the GITEWS concept (instrumentation, modelling & simulation, decision making process) perceived in comparison with other early warning approaches?
3. How has the concept transformed in operations so far from an end-to-end perspective, and what is still missing (Gap Analysis)?
4. What is the role of GITEWS in the ICG-IOTWS process and its engagement in other countries?

The review team led by Stefano Tinto (University of Bologna, Italy) included Charles McCreery (Director PTWC, USA), Tony Elliott (ICG/IOTWS Secretariat, Australia), Sam Hettiarachchi (University of Moratuwa, Sri Lanka), Takeshi Koizumi (Japan Meteorological Agency), Srinivasa Kumar (INCOIS, India) and Chris Ryan (Tsunami Warning Center, Australia).

The first two days of the review process took place in the BMKG offices in Jakarta. The review team and invited participants from InaTEWS and GITEWS were welcomed by Ibu Sri Woro (Head of BMKG, Indonesia), Pak Pariatmono (RISTEK, Indonesia) and Reinhold Ollig (BMBF, Germany).

Jörn Lauterjung (GFZ and head of GITEWS, Germany) provided an overview of the GITEWS program, highlighting that the GITEWS approach to cope with near field tsunamis is based on a unique combination of sensors (especially seismic, GPS and ocean observation) and tsunami modelling. The integration of all sensor data with an extensive database of pre-calculated scenarios via a Decision Support System (DSS) allows for quick decision making once a tsunami threat occurs. The support from GITEWS in the downstream part for the development of procedures and preparedness mechanism at local level contributes to link communities at risk to the system and to transform the warnings into action.

Further detailed information was provided by representatives from the various GITEWS working packages.

The first day closed with a dinner reception by Mr. Rottmann, the Counsellor of Science and Technology of the German Embassy.

On the second day the review team visited the National Warning Center at BMKG to observe and discuss issues related to the DSS, communication technologies and the established procedures. Experiences from past events were presented to illustrate how the system works and interact.

Before moving on to the next location – the Pilot Area Bali - the reviewers internally discussed the findings so far and provided a first feedback on the upstream part.



The reviewers acknowledged the concept and strategy of the project to tackle the problem of Near-Field Tsunami threat in Indonesia. They highlighted the multisensor / multiparameter approach to reduce uncertainties in the early stage of the warning process. The consequent integration of all available sensor data into the scenario based tsunami forecast and the assimilation of the resulting situation picture with available risk- and vulnerability information in the decision making process was recognized as one of the outstanding innovations. In addition a number of recommendations have been given to optimize the sensor networks.

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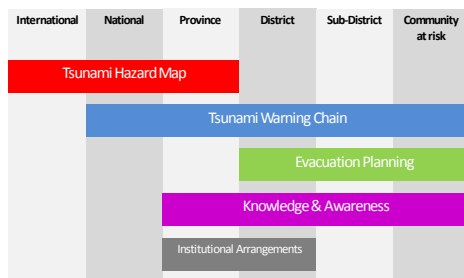
Discussion with Bali Governor Made Mangku Pastika in the Emergency Operation Center / Tabletop exercise / Discussing SOPs

GITEWS Review – in the Pilot Area Bali

The second part of the GITEWS review focused on the downstream part. To learn about the work and the results in the GITEWS pilot areas, the review team, members from BMBF and GITEWS accompanied by representatives from national partner organizations (RISTEK, LIPI, BMKG and DEPDAgRI) as well as observers from AusAID and UNDP travelled to Bali.

The group was received by Governor of Bali Made Mangku Pastika at the provincial Emergency Operation Center (EOC) in Denpasar. He emphasised the need for disaster preparedness and expressed his appreciation for the contributions from GITEWS engagement in Bali.

Gede Sudiarta, the local GTZ advisor, provided a short overview of the GITEWS cooperation in Bali, pointing out that the set up of tsunami preparedness mechanism in Bali required cooperation across various levels (from international to grassroots).



He explained that the role of the GITEWS project was to support the local partners by providing technical advice, facilitation and training throughout the process, and to contribute funding for workshops, local dissemination technologies and awareness materials.

The first topic for the review was the tsunami warning chain in Bali. The Balinese partners explained the functions of the local EOC and the crew demonstrated with a short tabletop exercise the procedures for receiving and evaluating tsunami information from the National Tsunami Warning Center and for taking the decision to call for evacuation. Further discussion addressed the question of how the public are reached from the EOC.

The discussion then moved on to the development of the official tsunami hazard map and how it was translated it into local evacuation strategies. The project presented a two-zone concept, which was developed together with the Balinese partner. This concept distinguishes between areas of higher and lower probability of tsunami inundation, allowing priorities to be set and differentiated procedures for evacuation defined. In this context, it was also noted that the current InaTEWS warning levels are not adequate to distinguish between “average” and “worst case” scenarios, although such a distinction would benefit practical evacuation planning on the ground.

The next stop during the review in Bali was the office of the village head of South Sanur. Community representatives explained how they are linked to the early warning system and presented their local evacuation plan. They pointed out that recently an agreement was reached to use the traditional *kulkul*, which is a wooden drum, to disseminate tsunami warnings in their area. To increase public knowledge and awareness of tsunami risk and early warning, local facilitators had been trained by the project and are currently implementing a community awareness campaign.



GITEWS cooperation with the tourism sector in Bali was the last point on the agenda. Representatives from the sector presented a tool kit and described the procedures developed by the Bali Hotels Association to disseminate warnings, and inform and evacuate guests in the event of a tsunami threat. The agreement of evacuation procedures between hotels and communities in Tanjung Benoa was presented as an example of a successful private public partnership initiative.

The reviewers acknowledged that the Bali Pilot Area is a good example how to link and integrate the local government and community level into the national warning system. By defining a local legal framework, a solid base for early warning and preparedness mechanism had been achieved.

Looking on a broader scale, the reviewers noted that “the system isn’t complete” yet: many Indonesian communities are not yet linked to the system. A strategy to upscale the experiences from the pilot areas in Indonesia is required. Furthermore, the development of indicators or minimum standards for the downstream part was suggested.

They also recommended sharing the Indonesian experiences within the IOTWS and even with other TEWS around the globe.

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Tabletop exercise at the EOC / Handover of project documents to the deputy mayor of Denpasar / *Kulkul* in Sanur

Bali

Recently, traditional organisations (*lembaga adat*) in Bali have approved the use the *kulkul* - a traditional communication tool - to disseminate tsunami warnings to the community at risk when the local village (*banjar*) receives a warning from the local emergency operation centre (EOC) or local media. Unlike in Java, where a similar tool (*kentongan*) is used, here in Bali the *kulkul* is controlled by the local traditional organization in each *banjar*.

A new role for the traditional *kulkul*: dissemination of tsunami warnings

The Bali Province EOC has conducted a workshop to integrate the *kulkul*, a local traditional communication tool, into the tsunami early warning chain. Traditional organisations in Bali had previously agreed to make use of the *kulkul*, a set of wooden drums, for early warning purposes. As a next step, a new sound pattern needs to be agreed as specific sounds of the *kulkul* are used for specific purposes. Representatives of the traditional organisations at province level will address this issue at their next official meeting.

The workshop was attended by the heads of the traditional organisations from Badung, Denpasar, Kuta, Tanjung Bena and Sanur, the civil protection offices of Bali province and Badung district, and the local disaster management agency (BPBD).

The participants plan to hold another, bigger meeting on this issue.

Public hearing for Sanur evacuation plan

Denpasar BPBD suggested holding a public hearing before the official issue of the reference document on the Sanur evacuation plan.

The aim of the hearing was to obtain final inputs on the evacuation strategy and procedures developed for Sanur.

Another reason for the hearing was to enhance the local community's understanding and ownership of the evacuation plan as the plan will serve as a reference for the development of local procedures at village or institutional (school, etc.) level later on.

The hearing was led by the head of Denpasar BPBD and attended by representatives from relevant institutions in Denpasar, representatives from Sanur communities, and from the Denpasar working group for evacuation planning. The next step will be endorsement of the plan by the mayor of Denpasar.

Hand-over of project products to partners in Badung and Denpasar

At separate meetings, the project briefed the deputy mayors of Badung and Denpasar districts on the latest project achievements and officially handed over all relevant documents developed by the GITEWS cooperation, including hazard and evacuation maps, concept and reference documents, and awareness and educational materials.

It was agreed that the local administration will ensure that this information is made available to lower administrative levels (villages) within their respective areas.

School evacuation exercise

The first school to exercise its tsunami evacuation procedures, developed in the framework of the school awareness initiative, was the primary school (SD1) in Tanjung Bena.



The exercise was carried out on 26 September in parallel with the monthly testing of the nearby siren. The school evacuation procedures were developed based on the sub-district evacuation map.

3rd Tabletop exercise at Bali EOC

The third and last of a series of tabletop exercises has been completed at the Bali Province EOC in cooperation with the French Red Cross (FRC) and Indonesian Red Cross (PMI).

The next step to improve the tsunami early warning skills of the EOC will be to conduct a larger scale field simulation exercise involving stakeholders and representatives from district level and the community at risk.

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Next steps in Bali Pilot Area

Continuing the school awareness initiative in Kuta, Sanur and Tanjung Bena. Installation of evacuation signs and signboards in Kuta. Final assessment workshop (7 October) and final workshop in the Bali Pilot Area (26-28 October).



GTZ consultant Tito Radityo and representatives from the sub-district in Ciamis during the hazard mapping / Iwan Sutarto B. of the Indonesian navy opened the SAR Network meeting / SAR technicians and SAR members at the meeting

Java

Tsunami hazard mapping for the Districts of Ciamis and Purworejo, and the institutionalization of the SAR communication network were the highlights in the last quarter. Preparations were also made for activities planned to be carried out until end of 2010.

Tsunami Hazard Mapping

The tsunami hazard mapping for the districts of Ciamis and Purworejo has been completed after six months of intensive exercise by the local stakeholders. This experience revealed some lessons learnt useful for future replication in other tsunami prone communities.

To the project, this replication means that the generated methodology was tested again and found applicable elsewhere, and that the tsunami hazard maps produced are considered appropriate. Further, this experience has encouraged the working groups from the five districts in the Java Pilot Area to understand the importance of inter-district cooperation, since it has shown that inexperienced communities can access expertise from the other, more experienced districts. (see Feature - Java Hazard Mapping, on page 7 for further details.)

The resulting tsunami hazard maps have filled an important knowledge gap for the further development of community response capacities in the respective districts, and they will serve immediately as the basis for developing the tsunami evacuation plans for the involved communities.

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SAR Communication Network

Having been provided with additional equipment (three repeater units and several VHF radios) by the project, since 2008 a significant improvement in emergency communication has been demonstrated by SAR members in the south coast of Java, particularly during the recent earthquakes in Tasikmalaya (02.09.09) and Bantul (12.09.10). The network, known as 'Jaring Komunikasi SAR Selatan-Selatan' is currently used by SAR communities in districts from Gunung Kidul to Ciamis, thereby linking coastal communities in three provinces: Yogyakarta, Central Java and West Java.

The users agreed to institutionalise the network by defining its purpose, organisational structure, and internal procedures. To this end, representatives of the members met for the first time on 25 September. The meeting, at the navy post in Kebumen, was organised by Elang Perkasa SAR, and attended by sixty SAR, navy, military, police and Indonesian Red Cross personnel from Bantul, Purworejo, Kebumen, Banyumas, Cilacap, and the provinces of Yogyakarta and Central Java. The members agreed to provide feedback on the draft vision and mission and procedures, and the proposal for the (self) funding. The next meeting to finalise the drafted internal documents is scheduled for March 2011.

Underway...

Several activities were carried out to arrange the final activities within the GITEWS project in the Java Pilot Area.

> A visit by representatives from Purworejo and Ciamis to Bali was carried out to learn about the tsunami evacuation mapping experiences of the local stakeholders in Kuta and Sanur. These experiences motivated initiation of a similar process in the two Javanese districts.

> Meetings with working groups from Kebumen, Bantul and Cilacap took place to improve the tsunami evacuation maps and procedures. The final versions will be used for further dissemination.

> The development of tsunami drill guidelines and meetings with relevant parties was supported to encourage the testing of the implemented TEW components in a joint tsunami simulation exercise.

> Meetings with the civil protection agency (Kesbanglinmas) in Yogyakarta were held to prepare for the final workshop. The purpose of the workshop is to share experiences from the Java Pilot Area with representatives from all the tsunami prone districts adjacent to the south coast of Java. The workshop will be hosted by the Province of Yogyakarta.

Next steps in Java

Purworejo and Ciamis will develop tsunami evacuation plans starting in October. The final workshop for Java Pilot Area will be held in early November. The districts plan to have small joint tsunami simulation exercises in December to test their implemented TEW components.



September 2009 earthquake monument enscribed with the names of the 383 people who lost their lives in Padang city

Padang

A group of facilitators has been trained recently to increase awareness and knowledge about tsunami warning and evacuation procedures at grassroots level. The facilitators will act as a bridge between the community at risk and the institutions and working groups related to disaster management in Padang, including the local disaster management agency (BPBD), the Journalist Network for Disaster Preparedness (JJSB), the Community Group for Disaster Preparedness (KPB), and the CBDP Group.

Training of Facilitators for Community Outreach

Eighteen representatives from communities in tsunami prone areas and from community outreach groups were trained to strengthen facilitation skills and knowledge about tsunami hazard and risk, the early warning system, and the local evacuation plan and procedures.

Following the training, the facilitators plan to hold community meetings at village or ward level to provide information about tsunami risk and early warning and assistance to develop local tsunami evacuation procedures based on the current local warning and reaction scheme and the evacuation plan for Padang that is currently being developed.



They are accompanied and supported by BPBD and other disaster preparedness actors such as the Indonesian Red Cross and the Tsunami Alert Community (KOGAMI). A monitoring mechanism was set up to assure smooth implementation and improvements of the initiative.

Padang Tsunami Evacuation Map

At the third meeting, the working group discussed and agreed on several open questions related to the evacuation strategy, evacuation zoning and official recognition of the map.

As some data for the northern and southern part of the city are incomplete, the definition of the evacuation zones in these areas has yet to be finalised. While waiting for the delivery of this data from the scientists involved, the local actors agreed to develop a first version of the evacuation map based on the available data from the Padang Consensus process. This was because the local government wanted to make use of the opportunity of the commemoration the 30 September 2009 earthquake to distribute the first version of evacuation map to the public.



The mapping team is now working to complete the evacuation plan document, which shall be endorsed in form of a local regulation (PERDA).

Commemoration of the 30 September 2009 earthquake

Several activities were conducted to commemorate the September 2009 earthquake:

At province level, workshop and training events as well as an exhibition about disaster risk reduction and a "flashback" to the 2009 earthquake took place. A number of institutions involved in the emergency response phase participated.

In Padang city a ceremony to inaugurate a monument to the 2009 earthquake and present the first version of the tsunami evacuation map took place on 30 September 2010. In remembrance of the earthquake at 5:16 pm all local sirens were sounded. This was followed a minute of silence. The names of those who lost their lives are carved on the monument.



On the same day a drill was carried out at the EOC to test the early warning equipment and provide test warnings for tsunami drills in Padang Pariaman and Pesisir Selatan. Both districts conducted a tsunami drill to test their early warning and evacuation procedures.

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On-going activities in Padang

Revision of the local disaster risk reduction plan towards the creation of a local action plan and emergency response procedures (SOPs). Preparation for evaluation and lessons learnt workshop and final workshop in the Padang Pilot Area. Preparation for a tsunami drill.



The mapping teams discuss coastal features in Purworejo and topographic map of Ciamis / Tsunami hazard maps for Purworejo and Ciamis

Hazard Mapping

The need for tsunami hazard maps for the districts of Purworejo and Ciamis has been met as the result of a joint effort by the Cilacap, Kebumen, Bantul, Purworejo and Ciamis working groups. The development of the two tsunami hazard maps is a tangible result of the inter-district cooperation in the Pilot Area of Java.

Inter-district Cooperation

Inter-district cooperation has resulted in tsunami hazard maps for the districts of Ciamis and Purworejo, which recently joined the Pilot Area Java. The mapping commenced in late April and was completed by mid September. The Ciamis and Purworejo working groups played the most active role in the mapping process, whilst the experienced Bantul, Kebumen and Cilacap working groups and a GIS resource person (Tito Raditya) ensured that the mapping followed the recommended methodology and that the quality of data used and the results were adequate. Local SAR members participated in the collection and cross-check of data in the field, and the local people visited contributed the required information through interviews.

Replication of Methodology

The mapping adopted the "low-tech" methodology previously developed in the PA Java, which has yielded tsunami hazard maps for the districts of Bantul, Kebumen and Cilacap (2008). This first re-application of the participatory approach confirmed that the methodology can be replicated in other areas by local stakeholders. It took about six months and was perceived as practical in its application.

It was expected that each application of the methodology would be an important opportunity for continuous improvement, and this experience has provided a number of inputs which will be used for the future improvement of the mapping method

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Implementation Process

The mapping process adhered to the recommended four-step approach prescribed in the methodology. The hazard mapping involved five meetings with local stakeholders from the two new districts, working groups from three experienced districts and a resource person, which were followed by practical work indoors and outdoors.

The first step was to introduce the methodology to all the local stakeholders to identify local mapping experts and the logistical support needed. The next meeting brought together the local experts to achieve a common understanding of the characteristics of tsunami hazard mapping and basic concepts. This second step was also to agree on the work plan, including the field visits for data and information gathering via observations and interviews. In the third step, the mapping team began to draw horizontal lines parallel to the coastlines and rivers. The data and information collected were used as inputs to delineate vertical components: contours and elevation points, as well as geomorphology, anthropogenic and vegetation features. The combination of these features created base maps. In the fourth step, the team continued by determining scenarios for probable tsunami events in the local areas. Combining the geographic features in the base maps and the scenarios led to the production of two-scenario hazard maps.

An additional meeting was held to present the process documentation and the resulted hazard maps to the other local stakeholders to obtain further inputs before being finalised.

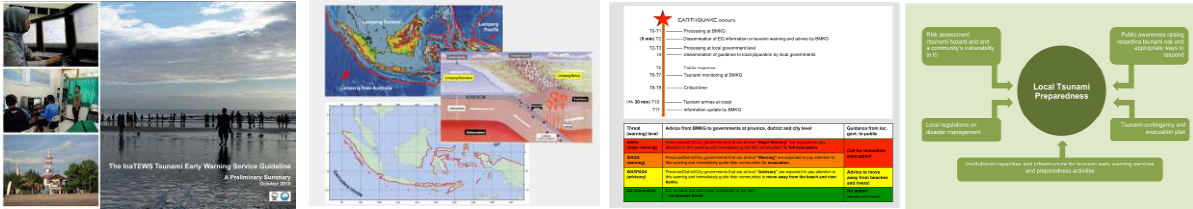
Lessons Learnt

The documentation of the mapping process identified a number of lessons learnt during this first experience of replication. Highlighted lessons are:

- Generally, the methodology is applicable in other tsunami prone areas, utilising available local resources (bigger scale of topographic maps, historical data, etc.), mapping tools (altimeter, GPS, computer set with GIS programme, drawing tools, etc.) and local stakeholders.
- Commitments on the voluntary basis of and contribution from local stakeholders were crucial to enabling and completing the hazard mapping process.
- Smaller local teams, equipped with basic mapping knowledge and time resources, were found most effective at taking a lead in the overall process.
- Local resource people and direct observations in the areas (which have been and / or are potentially affected by tsunamis) provided the most valuable and up-to-date data and information for producing sound tsunami hazard maps.
- To assure quality, the tsunami hazard maps produced should be evaluated by conducting desk verification and field visits.



Presentation of the tsunami hazard map to the local stakeholders in Ciamis



Preliminary summary of the InaTEWS Warning Service Guideline: tsunami hazard in Indonesia / warning sequence and content / local preparedness needs

The InaTEWS Tsunami Early Warning Service Guideline – a preliminary summary

Principle 1: Indonesia is prone to tsunamis due to the fact that its coastline is generally very close to tsunami sources. Local tsunamis can reach the shore in less than 30 minutes after an earthquake.

Principle 2: Early warning is a combination between technology and community capacity in responding to the information that is provided by the technology. As a component of disaster risk reduction, early warning is not only the production of technically accurate warnings but requires an understanding of risk, a reliable link between providers and users of warnings as well as the capacity to respond appropriately to warnings on the part of communities and authorities. A lack in any one of these elements can mean failure of the whole warning system.

Principle 3: BMKG provides earthquake information and tsunami warnings to local governments and the media. Local governments are responsible to guide their community in responding to this information and to decide whether to call for evacuation or not.

Principle 4: BMKG uses seismographs for earthquake observation, GPS for the observation of land deformation, as well as buoys and tide gauges to observe tsunami propagation. Through communication networks, data from these instruments is sent to BMKG, to be processed and used as the basis to develop tsunami threat scenarios.

Principle 5: BMKG publishes earthquake information or tsunami warnings 5 minutes after an earthquake, which are followed by several updates and/or an all-clear message. The warning messages contain the tsunami threat level by district: "Awat" (major warning), "Siaga" (warning) or "Waspada" (advisory).

Principle 6: BMKG sends earthquake information and tsunami warnings to the public through local governments and media, using various communication channels.

Principle 7: Local governments are obliged to guide people's response to groundshaking from a nearby earthquake based on the information received from BMKG.

Principle 8: Local governments have to make sure that they are able to receive earthquake information or tsunami warnings and advice from BMKG accurately and at any time (24/7) through various communication devices.

Principle 9: Local governments are expected to have the capacity to decide about the actions to be taken in their region (i.e. whether to evacuate or not) in a timely manner, based on earthquake information, tsunami warnings and advice from BMKG as well as local Standard Operating Procedures (SOP).

Principle 10: Local governments are required to make use of various communication devices that enable them to widely disseminate earthquake information or warnings and guidance for evacuation to the public. Amongst other, sirens are effective tools to call for evacuation. A steady 3-minute sound from a tsunami siren means "immediate evacuation".

Principle 11: If people feel a strong earthquake, they are required to immediately evacuate to a safe location while looking for guidance from local government. Earthquake information and warnings from BMKG that contain the estimated threat level and advice for response are the basis for official guidance to the public that either reinforces evacuation or cancels evacuation if there is no tsunami threat.

Principle 12: Tsunami preparedness depends on the level of preparedness of both local institutions and the people. Local governments, together with other stakeholders, are obliged to analyse the tsunami risk, prepare tsunami contingency and evacuation plans, develop institutional capacity as well as infrastructure for early warning, issue local regulations for disaster management and raise people's awareness of the tsunami risk and appropriate ways to respond to it.

(Principles adopted from: "Preliminary summary of the InaTEWS Tsunami Early Warning Service Guideline" that will be published in 2011 by BMKG.)

The Four Elements of People-centred Early Warning

Conduct risk assessment and collect data systematically

Risk Knowledge
Use the science and technology to assess and identify the risks and to map and data a wider range

Monitoring and Warning Service
Apply appropriate technology to have a reliable and timely warning service

Develop operation technology and warning service

Dissemination and Communication
Develop various media channels, including traditional and modern communication technologies

Response Capacity
Develop community capacity to respond to warnings and to take appropriate actions

Provide clear, consistent, and guidance

Build awareness and institutional preparedness

People-centred early warning

InaTEWS observation

Roles in the warning chain

Local warning dissemination

Local standard reaction

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The final workshops will provide opportunities for networking, exchange and sharing experiences

Final Workshops in the Pilot Areas

Will be held to discuss the findings from the evaluations and the way ahead. These workshops will also be a platform to provide updates on the latest developments of InaTEWS and to share experiences from the pilot areas with representatives from many other tsunami prone districts along the Indian Ocean coastlines of Indonesia. On this occasion we will also launch the **TSUNAMIKit**.

Day 1: Meeting with Local Partners

An internal meeting will be conducted on the first day. Participants will be working group members and political representatives from the respective pilot area. The agenda for the first day includes:

- Presentation and discussion of achievements in the pilot area
- Identification of pending issues in order to ensure the operation of tsunami early warning and to strengthen tsunami preparedness in the pilot area
- Agreements on future working mechanisms
- Official handover of project products to partners

- Providing opportunities for networking and discussion about possible cooperation (local-local and local-national)

For the third day, a field trip to selected locations will be organized. Here participants will have the chance to learn first hand about the achievements towards tsunami preparedness and the implementation of tsunami early warning in the pilot areas. The field trip particularly targets the representatives from neighbouring districts, national institutions, local media, and multipliers.

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Day 2 and 3: Sharing Experiences

The participants from day 1 will be joined by representatives from local disaster management agencies of neighbouring districts, national institutions, local media and multipliers. The agenda for the second day comprises:

- Presentation of the latest updates on InaTEWS, including the new warning scheme and guideline
- Presentation and sharing of experiences and best practices from the pilot areas
- Presentation and handover of the **TSUNAMIKit**



Final Workshops

PA Padang: 19 – 21 October
 PA Bali: 26 – 28 October
 PA Java: 02 – 04 November



TSUNAMIKit documents

TSUNAMIKit

The objective of the GITEWS Pilot Project “Capacity Building in Local Communities” was to develop and test mechanisms and procedures for tsunami early warning and preparedness at community level within the framework of the implementation of InaTEWS. To make these experiences and results available for further up scaling and to share them with other coastal communities and their governments in tsunami prone areas a comprehensive documentation - the **TSUNAMIKit** – has been developed.

Content of the Kit

The content of the kit is organised according to the key elements of tsunami early warning:

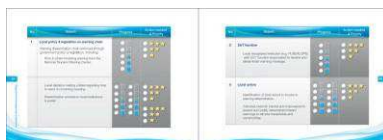
- **Risk Knowledge**
- **Monitoring and Warning Services**
- **Dissemination and Communication**
- **Response Capacity**
- **Knowledge and Awareness**
- **Governance and Institutional Arrangements.**

For each of the six elements different types of documents have been prepared, which either provide background information or support for local stakeholders to plan and implement tsunami warning and strengthen preparedness:

Intros provide essential background information and an overview of the content of the Kit related to the respective element.



Checklists help local stakeholders to plan and monitor their efforts in early warning and preparedness.



Tools provide practical advice for implementation in the form of manuals, guidebooks and guidelines.



Best practices and experiences from the work of the pilot project are portrayed in brief factsheets, called **Our Experience and Info.**



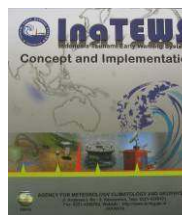
A collection of materials for public education can be found under **Outreach Materials.**

Other useful information and references are compiled in the **Further Resources** part of the kit.

Outreach Material & Further Resources



Science in Music - LIPI



InaTEWS Booklet –BMKG



Tales of disasters - IDEP



Budi Jadi Sunatan - GTZ

and much more....

online by November 2010!

www.gitews.org/tsunami-kit



TSUNAMIKIT DVD / TSUNAMIKIT website



TSUNAMIKIT

The **TSUNAMIKIT** is published in Indonesian and English. Hard copy and digital versions are available. The hard copy comes in a bag and the digital versions are available on DVD or via the internet.

TSUNAMIKIT - BAG

The **TSUNAMIKIT - Bag** contains printed documents, outreach materials as well as video and audio DVDs. The bag has six colour-coded compartments containing the materials for each of the six elements of the **TSUNAMIKIT**.



Also in the bag is a **TSUNAMIKIT - DVD** which contains complementary documents for **further information** and a short **user manual** for easy navigation through the Kit.

TSUNAMIKIT - DVD

The DVD contains all documents and most of the video and audio materials in a digital format. It is structured in the same way as the hard copy version according to the six elements.



User Information

TSUNAMIKIT - WEB

Via the website you can access all digital documents of the **TSUNAMIKIT**. The web version follows the design and structure of the **TSUNAMIKIT - DVD**. It also includes links to YouTube where videos have been uploaded. The digital version provides additional information about the project and the partners.



Acknowledgements

The **TSUNAMIKIT** compiles experiences and lessons learnt from more than four years of close cooperation between numerous individuals, working groups, institutions and projects from various levels and backgrounds in the three GITEWS Pilot Areas and beyond.

We would hereby like to express our sincere gratitude to our national partners in Indonesia, RISTEK, LIPI and BMKG, as well as the various partners in the GITEWS Pilot Areas in Bali, Java and Padang - the local governments, civil society organisations, private sector representatives and the residents of coastal communities - for the fruitful cooperation over the years.

The compilation and editing of the **TSUNAMIKIT** kept a group of very committed people busy for quite some time. Thanks to all of them and also to MAKATA for the unique design.

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online by November 2010!

www.gitews.org/tsunami-kit

Project Team Meeting

Puncak, 26 – 30 July 2010

The second team meeting in 2010 focused on two main issues:

1. Detailed planning of the remaining months of the project, including project closure proceedings.
2. "Post-GITEWS" – up scaling of experiences from the Pilot Areas
3. During the first three days of the meeting, the team discussed the activities and work plan for the remaining months of the project. Besides the ongoing processes and activities in the pilot areas, main activities will focus on completion of the **TSUNAMIKit** and the preparations for the final workshops in the pilot areas.
4. Day four of the team meeting was dedicated to procedures for project closure and an exchange of ideas regarding "life after GITEWS". The team identified a number of proposals for supporting support a future up scaling process.
5. On the last day the team worked on technical questions and concepts related to the development of the National Warning Chain Guideline and the Tsunami Evacuation

"Early warning practices can save lives: selected examples"

This recent ISDR publication compiles good practices and lessons learned including two contributions from our project. The publication is available online and can be downloaded at:

<http://www.preventionweb.net/english/professional/publications/v.php?id=15254>



Best Wishes for a Happy and Prosperous Idul Fitri 1431

Farewell

Nurul Imany (**Ima**)
Imanys@yahoo.com



Ima worked as part of the team from June 2008 to July 2010 and was in charge of the project office management, which she handled in a very dynamic and proactive way. We are grateful for her contributions and for sharing her valuable experience with the project. We wish her all the very best for the future.

Welcome

Debora Setiawarman (**Debora**)
debora.setiawarman@gtz.de



Debora took over the management of the project office from Ima by mid July. She is not new to GTZ as she already joined two Debora took over the management of the project office from Ima in mid July. She is not new to GTZ, having worked on two projects in the past. She started working in the field of development cooperation in 2002, first with an USAID project and later with CIDA (until 2009). With more than 15 years experience in administrative services, she is well prepared to support the GITEWS team through the final phase of the project. She added, "However, the most pleasant moment for me is being a mother and wife and to be pleased about the food I cook".

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