

## Training for Tsunami Early Warning Services at Local Emergency Operation Centres

### BACKGROUND

Local 24/7 Emergency Operation Centres (PUSDALOPS) play a crucial part in the tsunami warning chain. They are responsible to provide guidance to the communities during a tsunami emergency and to call for evacuation. Operators in the PUSDALOPS must be able to act quick and in accordance with previously established SOPs.

As part of the PROTECTS capacity development program a training module has been developed to prepare emergency control centres at the provincial and/or district/city level to implement, operate and improve local tsunami early warning services.

### ABOUT THE TRAINING

The 2-day training is targeted to manager and operators of local emergency operation centres who play a key role in the management and operation of the tsunami early warning service and are able to share their knowledge within their unit.

The emergency operation centre should be already equipped with sufficient staff and basic communication technologies to be able to receive warnings from BMKG and to disseminate warning and guidance to the institutions and public in their respective area. Ideally basic tsunami warning SOPs and the warning receiver system (WRS) provided by BMKG are already in place.

The topics covered by the training are, among others: basics on tsunami hazard in Indonesia, concept and warning scheme of the Indonesian Tsunami Early Warning System (InaTEWS) and the roles of PUSDALOPS in the tsunami warning chain. The training includes hands-on exercises on how to handle tsunami warning messages from BMKG to strengthen participants' skill in applying the warning reception and decision making procedures, so that timely warning can be spread out.

The training also incorporates sessions to examine current or draft SOPs and come up with an action plan for the further improvement of a well-functioning local tsunami early warning service.

The training is in line with the official Indonesian warning policies and procedures as documented in the *Tsunami Early Warning Service Guidebook for InaTEWS* published by BMKG.

### TRAINING MANUAL & REFERENCES

A Training Manual is available and contains general information on the training, a training moderation plan as well as supporting materials for trainers to conduct the training. The moderation plan describes the different training sessions indicating their objectives, content, methodology, materials, time needed and what outputs are expected. The Training Manual also provides standard and sample training materials as well as formats for training management purposes.



Understanding the Procedures



Practical Exercise on WRS

As part of the training package important reference documents are provided including the official guidebook from BMKG on the InaTEWS Warning Service, the Warning Receiver System (WRS) as well as for Warning Dissemination by the Media.

## PRACTICAL EXPERIENCES SO FAR & LESSON LEARNT

In the frame of the PROTECTS project the training has been implemented in various districts and cities in NTB, Bali, Central Java and West Sumatra. The trainings were most beneficial in areas where participants already had some basic experience with tsunami early warning services and WRS was already installed. The participants were able to better relate with the exercises and then apply the learning in their work.

The training can be a trigger for substantial improvement of local warning services if the management actively participates in the training and assures that the findings during the different training sessions are followed up. The training methodology includes the development of an action plan at the end of the training.

Participants are encouraged to follow up the training with internal workshops to improve their SOPs, strengthen the local warning chain and periodically provide refresher trainings to their operators.

## FURTHER IMPLEMENTATION OF TRAININGS

It can be expected that the demand for trainings on local warning services will increase in the future as the downstream part of the Indonesian Tsunami Early Warning System is still under development. The Training Manual has been designed in a way that it will enable experienced trainers with solid background knowledge on InaTEWS warning services to implement the developed module without further assistance.

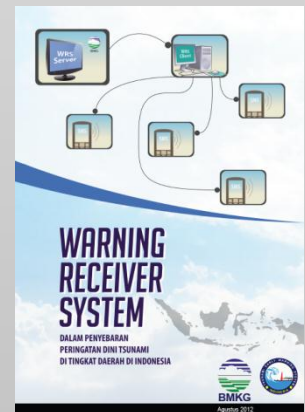
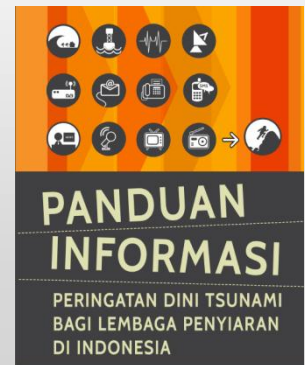
Nevertheless, it is to be asserted that for transfer and adaptation, it is recommended to seek the assistance of experienced trainers. A list of experienced trainers who developed and implemented the module along the PROTECTS project is provided further below. The complete Training Module was handed over to BMKG in Mei 2013.

## ACKNOWLEDGEMENT

The Warning Service Training Module was developed in close cooperation with BMKG and implemented in a joint program together with our Partners from the BPBDs and working groups at provincial and district level in Sumatra, Java, Bali and NTB as well as the national and regional offices of BMKG.



Discussion of SOPs



Warning Receiver System

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