Strategy for Pacific Knowledge Hubs: with a special focus on Tropical Cyclone Early Warning System in the Pacific

(BMKG-UNESCAP TEAM)

Regional Workshop on Strengthening MHEWS in Pacific Island Countries (Bali, Indonesia / 7-8 March 2018)

Structure of the Document

EXECUTIVE SUMMARY
1. INTRODUCTION
2. SITUATION ANALYSIS OF PACIFIC KNOWLEDGE HUB
   • 2.1. Regional Nodes
   • 2.2. National Nodes
   • 2.3. Local Nodes
3. IDENTIFIED CHALLENGES
4. RECOMMENDATIONS
   • 4.1 The Concept of FLEES
   • 4.2 FLEES as a solution
Introduction

- Recent study on gaps and needs assessment on early warning systems in the Pacific shows the persistent and emerging challenges from human resources, equipment/facility, to institutional arrangement to supporting policies;
- **Knowledge hub*)**: a network of multiple nodes at regional, national, and local levels, supports collecting and sharing geospatial data to produce and disseminate forecasts and warnings information;
- Knowledge hubs in the Pacific work based on multi-stakeholder partnerships, through facilitating of data sharing, data and information management and utilization, and practices in disaster risk reduction.

*) Definition of a knowledge hub is based on Evers, Hans-Dieter (2008) Knowledge hubs and knowledge clusters: Designing a knowledge architecture for development, Center for Development Research, Department of Political and Cultural Change, University of Bonn, Working Paper Series 27

Objectives

1. To analyze the operation of existing knowledge hubs in the Pacific, their key structures, strengths and weaknesses, potential benefits, and recommendations to strengthen them;
2. To provide recommendations for knowledge hub in the operation of early warning systems (EWSs) with respect to tropical cyclones;
3. To assist Pacific national governments and policy makers to better understand how knowledge hubs should work to improve EWSs in the Pacific.
Scope of the Strategy

1. Focusing on flow of data/ information for early warnings
2. Checking regional, national, and local nodes roles especially for TC events
3. Support the Pacific countries’ strategy for the dissemination of forecasting/warning information based on geospatial data

Research Methodology

1. Literature reviews:
   - Key entities at regional, national, local level as identified nodes within Pacific knowledge hubs
   - Expected role/mandate of each node for TCEWS
   - Available communication channels
2. Expert Group Meetings (EGMs):
   - EGM-1: Nadi, Fiji / 7 - 8 June 2017
   - EGM-2: Jakarta, Indonesia / 8 - 9 November 2017
3. In-person interviews, during:
   - 1st Regional Workshop organized by UNESCAP (Nadi, Fiji in September 2016);
   - Two intensive one-month training programmes organized by UN ESCAP, in collaboration with AIT (March, 2017); and BMKG (July 2017);
   - Country pilot projects conducted in six PICs, including Fiji, the Federated States of Micronesia, PNG, Solomon Islands, and Tonga (June and November 2017).
Analysis of Existing Knowledge Hubs

Fig. 1. Pacific Knowledge Hub for Tropical Cyclone Early Warning System: Networks of RSMC, TCWCs, TCACs, national agencies and communities

SW Pacific TCWCs Area of Responsibility (AoR)
Identified Challenges

1. Regional Nodes:
   - Based on WMO Guidelines on meteorological personnel, it is identified that some RSMCs have human resources issues for their long-term sustainable operations
   - Needs of RSMCs for reliable storm surge forecasting systems
   - Some issues in terminology used for warnings information from RSMCs that can be too technical for communities affected by TCs

2. National Nodes:
   - There are sometimes overlapped challenges faced by regional nodes as well as national nodes which could then impacts the capacity of the entire knowledge hub

3. Local Nodes:
   - Lack of community understanding of community to weather warnings makes the community in order to take immediate and proper actions.
   - Reluctance of some community members to evacuate in the event of disaster leaves their personal belongings at risks.
   - Some of the native community in countries which have lots of local language can not understand the warnings provided in English.

Recommendations

- Some findings are identified to develop key actions to further strengthen the Pacific knowledge hub to support hydro-meteorological early warning systems in the region, with perspectives of the flow of warning/forecast based on geospatial data/information;
- Overall identified challenges are sometimes complex, which is why non-traditional approaches should be proposed → Need to be addressed with a fast, simple, easy-to-apply, inexpensive and sustainable solution, in order to reduce the required efforts;
- The concept of FLEES to fulfill the challenges is then proposed;
To implement the principle of FLEES is by embedding it to implement in coordination with the Regional Road Map for Sustainable Development in Asia and the Pacific, to:

- facilitate the sharing of best practices and capacity-building;
- facilitate cooperation for access to technology, know-how and act together.

Thank you . . . .

Your constructive inputs & suggestions would be highly appreciated.