**TABLE ONE**

**BALI "PLAN OF ACTION"**

| Key Strategies | Action Item | Suggested Action / Timeline |
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| 5. Enhance national and regional efforts in improving the infrastructure and use of ICT for public safety and disaster management including disaster preparedness, relief and recovery efforts. | 5.1 Member countries are encouraged to use broadband to enhance the dissemination of disaster warnings. | Need clarification on broadband. Wireless broadband is recommended as compared with fixed line.<br><br>Recognizing difference technologies in different countries and integrate these into effective use of the system.<br><br>Create recommendation/resolution to keep PPDR spectrum.<br><br>Take into account accessibilities for people disabilities. (use W3C accessibility guidelines)<br><br>Other technologies such as broadcast radio, loudspeakers can be applied. The focus shall not be limited to only Broadband.<br><br>Broadband infrastructure is required. Require funding assistance.<br><br>Simple means are required now and broadband can come later.<br><br>Assess the reliability of wireless broadband |

| | | compared to fixed line for Island countries. |
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| | | More actions are needed for national governments to incorporate broadband tech into the whole of technology database or storehouse in not only disseminate but also communicate and other aspects of disaster management including early warning. At the regional and sub regional level we can share best practices as adopted by the advanced countries. |
| | | Create an APT portal for public access. All disaster mgmt orgs are linked here so that anyone in Region 3 can access one portal for all disaster info. |
| | | Provide the government an easy way to do an email broadcast to all ISPs and email servers (Yahoo, Gmail, etc), twitter, etc when required |
| | | Provide the government an easy way to do a cellphone SMS/text broadcast to all cellphones in the affected area when required |
| | | Create a Recommendation or Resolution to keep PPDR (narrow, wide and broadband) spectrum in each country |

| | 5.2  Member countries to strengthen disaster preparedness and effective use of broadband infrastructure in disaster communications at national and regional levels. | Exclusive availability to emergency staff. Service providers should be able to flag emergency.<br><br>Licensing structure provision infrastructure for disaster communication and to enable emergency service to gain access to.<br><br>More training course should be conducted by APT to help the countries in mastering of the new technology.  Awareness of ICT for disaster management among the average citizens is important. Against this, APT is requested to launch social experiment and pilot project towards this.<br>.<br>Have a dedicated government-owned broadband network<br>Promote more cooperation and agreements among neighboring countries with common disasters |
| | 5.3  Member countries to consider the development of national emergency ICT plans. | Baseline framework should be developed by APT and there should be commitment from the countries to implement.<br><br>National emergency ICT plan to be developed.<br><br>The plan should be developed to give full consideration of security, robustness of the |

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| | | system, the traditional technology and appropriateness of the system.<br><br>APT to consider program to provide consultancy in developing plan for HRD.<br><br>For those countries who have plans, share and promote them to those countries that don't have them<br><br>For those countries who don't have plans, go create them!<br><br>APT could provide a basic emergency ICT plan as a template for countries to start building from |
| | 5.4  APT to establish ties with national and regional disaster management agencies in strengthening member countries disaster preparedness, relief and recovery efforts. | APT should catalogue what available and identify leading expertise in the region.<br><br>APT should strengthen its ties with ITU, ESCAP and other agencies, especially within the framework of the Interagency Working Group on ICT where APT is co-convening, and other existing inititiatives in the region. APEC, ASEAN, PITA, ADRC, ADPC etc should be also partners for APT. |

| | | Create a directory, organized by disasters, of all disaster mgmt agencies for reference<br><br>Create a directory of equipment suppliers and their support numbers for immediate support |
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| | 5.5   APT to disseminate the information and assist in human resource development on disaster mitigation, preparedness, management and communication. | APT to continue the program and activities on Disaster Management.<br><br>Engage the leading expertise to provide HRD/Technical support.<br><br>More training workshops should be organized by APT to support the establishment of the proposed database, so that the APT members could help the enrichment of the base and possible setting up of branch database at the national level.<br><br>Create more workshops, training, etc for poorer countries<br><br>Create an APT website for reference materials<br>Create procedures and share |

## TABLE TWO

**Workshop on Disaster Management/Emergency Communications Recommendations**

| Issue | Suggested Action |
|---|---|
| Alerting Methods | Undertake a survey of systems in use including cost, advantages, disadvantages, protocols/guidelines for use then disseminate in a useful format but promote need for multi-modality. |
| | Common number/Common siren-sound/common sign to be used. |
| | Use of low tech equipment to complement the high tech equipment. |
| | Emergency Communications: one shall be look into the possibility of using multimodal (IP-based). CAP and alerting method adopted by ITU are part of multimodal system. |
| | APT should organize technology workshops in the future in venues close to the alerting centers such as national warning centers, community emergency response units so that people get more exposure to such facilities. |
| | APT to make assessment of existing warning systems in various countries. |
| | Need for accessibility for people with disabilities. Planning should include relevant community organisations |
| | APT to list out the available methods and technologies and related database shall be created. |
| | Simple to complicated system/low cost to highly sophisticated system to be studied for |

| | DCMS. (database) |
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| | APT or similar body could release a request for information to the market to identify low cost, low tech warning solutions suited to developing countries. |
| Organisational | Developing communication infrastructure. |
| | More coordination between international bodies with similar. |
| | Do stocktake of overlaps in focus, resolutions, etc. |
| | Sharing information, i.e., database |
| | Intra-regional cooperation and exchange of expertise between countries. |
| | To compile a compendium of best practices in emergency communications together with other organizations to reduce cost and produce greater impact. |
| | One contact point or group should be assigned to manage information on DMCS. |
| | Too many organizations work on the same thing. It is advised to combine the effort. |
| Infrastructure | Based on different approach/grades of systems available, HRD |
| | Recognize the communication infrastructure as part of critical infrastructure and risk management process. |
| | Identify the unified/common technologies such as Heli-SAT. |

| | Consider actions to construct resilience infrastructure. |
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| | Need regional kits when infrastructure damages.<br>Satellite and cellular interoperability is essential.<br>Need preposition satellite phone in remote location.<br>Continue to monitor emerging technology and promote low cost option. |
| Technology | Prime technology is radio/wireless methods, WiFi/SAT/WiMAX/Trunked Radio/GRN<br><br>APT to help disseminate the adaptable technology available in the region to the member countries.<br><br>GRN is to be considered.<br><br>Construct the common database for demand and supply of DMCS.<br>Survey and study state of the art technology and low technology including broadband available to DMCS.<br><br>New Zealand's document provides stocktake of various product. APT to conduct survey to member countries to take stock of what available in the region.<br><br>To consider document related to public notification |
| Policy/Regulation | Policies should be inclusive of all part of communities when planning disaster management. Escalate to higher levels.<br><br>Develop appropriate standard.<br><br>APT to run training courses for those countries in the preparation of emergency communication plans and strategies. APT to disseminate more information for the better |

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| | ratification of the Tampere Convention |
| | Radio spectrum allocation for PPDR. |
| | Support Pacific ICT resource center to play role in legislative act regarding emergency warning. |
| | Useful to combine telecommunications focus with broader emergency arrangement. |
| | Identify appropriate countries/regions/cities to run trials of prototype systems – categorise by geographic features, population, isolation, type of communications reliant on. |
| Others | More information sharing among APT member countries |
| | Make use of support system, i.e., training, Human resources. |
| | Information sharing and cooperation between APT and other organizations like ESCAP< ITU, ASEAN. |
| | Focus on communications and preparedness and response is important. |
| | Also need a focus on prevention activities |
| | Distinguish communications between agency and public alerting although noting link. |
| | Public alerting only as good as situational awareness to allow warning and response of community and agency to alert. |
| | Educating on awareness and preparedness and training. |