

An Embryonic Action Plan, Including a Conceptual Framework, for Regional Communication, Coordination, and Collaboration among Federal Hazard Mitigation Partners in the Pacific Islands

This document is based on deliberations that took place during the Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands (FHMPPI) in Honolulu, Hawai'i, on March 11 and 12, 2003. This meeting brought together representatives from Pacific Island agencies, institutions, and organizations involved in hazard mitigation–related projects and activities being conducted at the federal level. The objectives of this meeting were to

- Enhance communication, coordination, and collaboration among federal network partners in the Pacific Islands. Specifically:
 - Describe agency, institution, or organization hazard mitigation projects and activities—what they involve, where they are being conducted, by whom, and when;
 - Identify gaps and overlaps, priority needs, and information dissemination challenges and opportunities; and
 - Develop an action plan to support sustained dialogue among Pacific Island partners.
- Cultivate a sense of community and an appreciation for the unique physical and cultural characteristics of the Pacific Islands.

The March 2003 FHMPPI meeting took the form of a series of panel presentations and discussions on the topics of data collection that supports hazard identification, tools and techniques that can be used in risk and vulnerability assessments or in evaluating mitigation options, and mitigation measures or mechanisms being implemented. Each panel was asked to consider gaps and overlaps, priority needs, and information dissemination challenges and opportunities associated with a given topic area. This information was used to support a roundtable discussion focused on the identification of actions that can be taken to support communication, coordination, and collaboration among the federal *ohana*, or family, of hazard mitigation partners in the Pacific Islands. What follows is an outline of priority action items identified by the roundtable participants.

Action Items

*E lauhoe mai na wa`a, pae aku i ka `aina.
If everyone paddles the canoe, the shore is reached.*

During the next three months:

- *Create a regional mitigation partner Web site* where materials presented and generated at the March 2003 FHMPPI meeting can be found. This will include presentations, summaries of panel discussions and roundtable deliberations, and the projects and activities database produced prior to the meeting.

- Consider establishing a regional mitigation partners' list server as a means of facilitating an ongoing post-meeting dialogue.

During the next year:

- *Convene and conduct a 2004 Roundtable of Federal Hazard Mitigation Partners in the Pacific Islands.* Tentatively, this follow-up meeting will be held in Honolulu on March 16 to 18, 2004. An organizing committee will be established within the next few months. Reports from the working groups (see below) and deliberations regarding action items are likely to be key elements on the agenda. Consideration may also be given to the identification of a regional coordinator, ideally someone with the weight and credibility necessary to secure high-level support and consistent funding. It is envisioned that, at least for the next few years, representatives from Pacific Island agencies, institutions, and organizations involved in hazard mitigation-related projects and activities conducted at the federal level will meet annually.
- *Establish a regional coordinating council* or some such entity (Figure 1). Its role will be to
 - support ongoing dialogue between the providers and users of hazards-related products and services;
 - support capacity building by serving as a conduit for technical expertise, assistance, and training; and
 - evaluate and prioritize hazards-related products and services needs to leverage financial support.

This entity will be composed of individuals from within the federal *ohana*, including but not limited to the National Oceanic and Atmospheric Administration (NOAA), Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers, and U.S. Geologic Survey (USGS), tasked with the delivery of hazard mitigation-related products and services in the Pacific Islands. It will also include representatives from both the user and provider communities (e.g., state/territorial emergency managers and university researchers). Recruitment of coordinating council members will commence in the next few months. It is envisioned that the coordinating council will include, among others, a representative from each of the individual working groups (see below). The potential role of and connections to existing coordinating bodies such as the South Pacific Applied Geoscience Commission (SOPAC), the South Pacific Regional Environment Programme (SPREP), Pacific Resources for Education and Learning (PREL), Hawai'i State Hazard Mitigation Forum, and the Pacific Partnership will need to be explored.

- *Establish several working groups, or hui o hana.* It was noted at the March 2003 FHMPPI that there are several equally valid ways in which hazard mitigation-related efforts can be organized: for example, by use sector—emergency managers, incident responders, mitigation planners, researchers, and elected officials; by stages in the planning and response process—inventory, analysis, and implementation; by physical processes—climate change and variability, earthquakes, volcanoes and tsunamis; and by geography and culture—Micronesia, Melanesia, and Polynesia. Recognizing this enmeshed nature of hazard mitigation-related efforts, it is proposed that regional coordination be facilitated through the formation of *hui o hana* that encompass clusters of ongoing or proposed activity. Based on the deliberations that took place during the March 2003 FHMPPI

meeting, the following areas have been identified as nuclei of activity or interest around which a *hui o hana* could be formed:

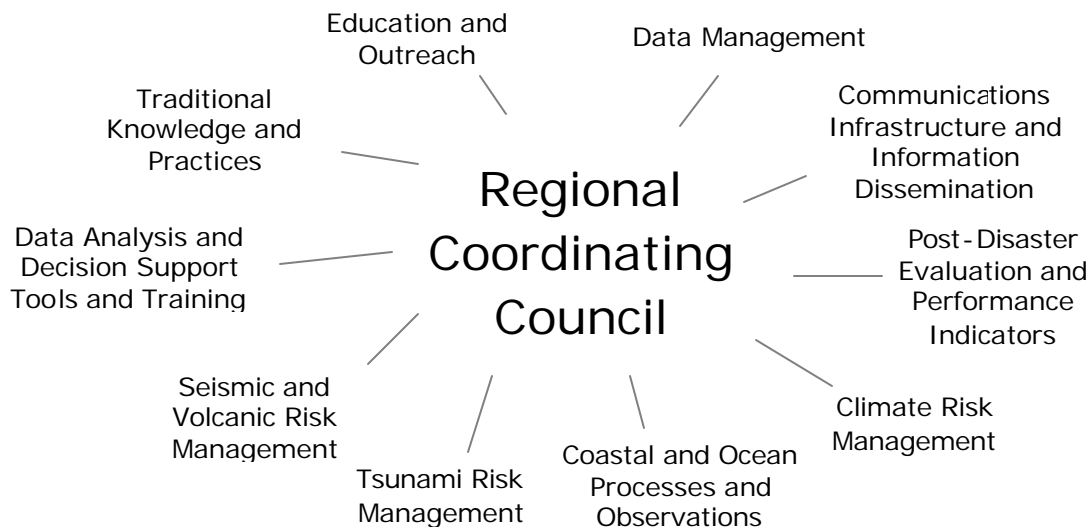


Figure 1. Conceptual Framework for Regional Communication, Coordination, and Collaboration among Federal Hazard Mitigation Partners in the Pacific Islands. A regional coordinating council composed of individuals from within the federal *ohana*, among others, will play the lead role in supporting dialogue between the users and providers of information. Members of the council will be drawn from several working groups, or *hui o hana*. These working groups will provide guidance to the council in its efforts to evaluate and prioritize regional hazards-related products and services needs.

- **Data Management.** Deliberations that took place during the March 2003 FHMPPPI meeting suggest that developing guidelines and protocols to facilitate regional geospatial data sharing is a high priority. This working group will examine needs and opportunities pertaining to data compatibility and conformity, as well as other data development-related issues (see below). FEMA's recently announced Interagency Geospatial Preparedness Team is relevant in this regard, as are FEMA's Map Modernization project, the USGS's National Map project, U.S. Office of Management and Budget's Geospatial One-Stop, and NOAA's Digital Coast and Enterprise GIS projects, among others.
- **Data Analysis and Decision-Support Tools and Training.** This working group will examine needs and opportunities pertaining to data analysis reporting methodologies and techniques (see below). Geographic Information Systems (GIS) and other information technology tools will also be considered. Training in the use of techniques and tools is included in this context. Ongoing or proposed efforts that are relevant in this regard include NOAA's Pacific Regional Integrated Sciences and Assessments (RISA) program, the Pacific Disaster Center's (PDC) hazards atlas for the Asia-Pacific region, FEMA's Map Modernization and Hazards U.S. (HAZUS) projects, and NOAA's Coastal Storms Initiative projects.

- **Coastal and Ocean Processes and Observations.** Efforts leading to an improved understanding of the coastal processes that may manifest as hazards (e.g., erosion and flooding) and the observing systems that support an improved understanding will be considered by this working group. An example is the University of Hawai`i (UH) Hawai`i/Pacific Regional Ocean Observing System project.
- **Climate Risk Management.** Needs and opportunities pertaining to climate change, such as NOAA's Pacific RISA project, will be explored by this working group.
- **Seismic and Volcanic Risk Management.** Efforts leading to an improved understanding of the seismic and volcanic processes that may manifest as hazards (e.g., earthquakes and lava flow) will be considered by this working group. Work being conducted by the Hawaii Volcano Observatory (HVO) is noted in this regard.
- **Tsunami Risk Management.** Efforts leading to an improved understanding of the tsunami risks and the dissemination of information about these risks will be considered by this working group. Ongoing International Tsunami Information Center (ITIC) and Pacific Marine Environmental Laboratory (PMEL) efforts are noted in this regard.
- **Communications Infrastructure and Information Dissemination.** This working group will examine needs and opportunities pertaining to the provision and distribution of information, such as the efforts of NOAA's National Weather Service (NWS) in the area of communications infrastructure and underserved communities.
- **Education and Outreach.** This working group will examine general educational needs and opportunities. Examples include the University of Hawai`i Disaster Management Degree Program, the East West Center–University of the South Pacific Training Institute on Climate and Extreme Events in the Pacific, and PREL's network of subregional service centers.
- **Post-Disaster Evaluation and Performance Indicators.** This working group will examine needs and opportunities pertaining to extreme events, post-disaster damage assessment, and the determination of loss estimates, as identified at the March 2003 FHMPPI meeting, such as the proposed Pacific Disaster Center post-disaster clearinghouse. The identification of criteria that can be used to assess the effectiveness of hazard mitigation measures (e.g., NOAA's recent efforts in the area of performance indicators) will also be considered by this group.

- **Traditional Knowledge and Practices.** This working group will seek to document cultural-based information pertaining to natural hazards and examine the extent to which this traditional information can be used to augment Western, science-based responses to natural hazards.

Although general interest and activity areas are identified above, it is envisioned that through a series of meetings and workshops each *hui o hana* will define its own scope of work, analyze gaps and overlaps, prioritize products and services needs, and outline an action plan. In this way, and through their representatives, the *hui o hana* will provide guidance to the regional coordinating council. It is recognized that *hui o hana* may not be formed in all of the interest areas identified above. However, considering that activities are already underway in several of these areas, it is anticipated that by the March 2004 FHMPPI meeting significant progress will be made towards establishing *hui o hana* as the mechanism to facilitate regional integration.

- *Commence a dialogue with end-users.* It is envisioned that this will take the form of a series of informational and educational workshops held throughout the Pacific Islands. The workshops will engage users of hazards-related products and services from a range of sectors including emergency managers, hazards planners, incident responders, elected officials, and other policy and decision makers. By providing insights into critical products and services needs, they will provide guidance to the regional coordinating council. The East West Center's Pacific Assessment follow-on project is an example of just such an effort to connect with users "eyeball to eyeball." Described as a series of briefings, meetings, and workshops designed to explore the challenges and opportunities associated with using information on climate vulnerability and change to support decision making at local, state, national, and regional levels, the first set of briefings, meetings, and workshops tentatively scheduled for October in Guam or the Northern Mariana Islands might serve as a prototype for the sort of user-directed information sharing, education, and perhaps training envisaged under this action item. It may also serve to enlist representative end-user members on the regional coordinating council. Potential linkages with the proposed NWS environmental education and outreach warning coordination meteorologist initiative team are noted here.
- *Develop a regional hazards-related projects and activities database.* The projects and activities database produced prior to the March 2003 FHMPPI meeting is a good start. In its current form it contains a great deal of information about what long-term activities and short-term projects are being conducted by a range of agencies, institutions, and organizations in the Pacific Islands. However, the information it contains is not really in a form in which the different projects and activities can be readily searched and compared. Additional work on the synthesis, as well as the reporting and display of existing information, is warranted. An effort to capture additional information, which includes a revision of the existing Web-based submittal form, is also warranted. *Focusing attention in this area over the next year will help to generate information needed to develop the databases and tools suite described below.*

- *Identify and prioritize regional and subregional products and services needs.* The regional coordinating council will play the lead role, with the working groups described above acting as the supporting cast. Decisions about which sectors and subregions to focus on (e.g., Micronesia, Melanesia, and Polynesia), exactly what information is needed to support decision making in each of the sectors or subregions, and who is responsible for overseeing these efforts will be reached through a process of ongoing dialogue between the providers and users of hazard mitigation–related products and services.

During the next two years:

- *Develop a regional database or set of subregional databases to enhance access to and ease of use of hazards-related data and information.* In addition to data pertaining to specific hazards including coastal storms (i.e., erosion and flooding), sea level rise, tsunamis, earthquakes, and volcanism, the databases will include framework, economic, environmental, and cultural assets data. (A specific need for building inventories and cultural assets data identified during the March 2003 FHMPPI meeting is noted here.) Consideration will need to be given not only to how this information will be served, but also how it is regularly updated. (Data compatibility and conformity issues were also noted above.) The concept of an integrated regional information service consisting of a distributed information network composed of a set of subregional hubs and accessed via portals targeted at and customized to meet the needs of users in specific sectors and subregions should be explored in this context. Ongoing or proposed efforts that are relevant in this regard include NOAA's Pacific RISA, the Pacific Disaster Center's hazards atlas for the Asia-Pacific region, FEMA's Map Modernization project, the USGS's National Map project, U.S. Office of Management and Budget's Geospatial One-Stop, and NOAA's Digital Coast and Enterprise GIS projects.
- *Develop a suite of regionally approved GIS and other information technology–based data analysis and decision-support tools.* The concept of a series of subregional information hubs with portals tailored to specific user sectors is also relevant in this regard. Suites of products and services might be identified for specific user sectors. In some cases, existing data and products may simply need to be repackaged. In other cases, new data and products may need to be developed. *An inventory of existing tools and an analysis of their validity and applicability is one of the first steps needed in this area.* The customer-oriented, needs-based approach to the development and deployment of products and services championed here will take advantage of opportunities afforded by regional affinities, but at the same time address the variability in “forecasting” needs that exist both spatially and temporally within the Pacific Islands region. Ongoing or proposed efforts that are relevant in this regard include NOAA's Pacific RISA, PDC's hazards atlas for the Asia-Pacific region, FEMA's Map Modernization and HAZUS projects, and NOAA's Coastal Storms Initiative projects.