

Asia-Pacific Economic Cooperation (APEC) Workshop on Hazard Mapping and Risk and Vulnerability Assessment

More than 50 people from North America, South America, Oceania, Southeast Asia and East Asia participated in the APEC Workshop on Hazard Mapping and Risk and Vulnerability Assessment, held October 19-21, 2010, in Chinese Taipei. The workshop was organized by APEC Technical Assistance and Training Facility (TATF) and Pacific Disaster Center (PDC), in cooperation with the National Science and Technology Center for Disaster Reduction (NCDR) and the Ministry of Foreign Affairs of Chinese Taipei. Funding for the development and presentation of the workshop was provided through USAID and APEC.

Participants were introduced to key concepts of hazard mapping and risk and vulnerability assessment through lectures and discussion, and applied these concepts during individual and group activities. Case studies presented by representatives from Thailand, Vietnam, Indonesia, Peru and Chinese Taipei integrated the ideas outlined during the workshop and provided examples of real-world applications. On the third day, participants explored aspects of data collection, preparation and analysis using ArcGIS software. Geographic Information Systems (GIS) technology was also part of the final hands-on activity in which groups identified benefits and costs, advantages and disadvantages of two mitigation options outlined in a fictional scenario. The organizers intended for those attending the workshop to gain a better understanding of requirements, constraints, methods and applications of hazard mapping, risk and vulnerability assessments, and supporting technologies.

Workshop materials, including PowerPoint slides, activity worksheets and instruction manuals, are available as PDF files through the links below. You will need [Adobe Acrobat](#) (or an alternative software) to open the files. The first file contains this introductory statement, as well as the Workshop agenda, which you may find useful if you are downloading and working through all the lessons.



Agenda

APEC Workshop on Hazard Mapping and Risk and Vulnerability Assessment

October 19-21, 2010

Grand Formosa Regent Taipei
Chinese Taipei

Day 1: Tuesday, 19 October 2010	
8:30 am – 9:00 am	Registration
9:00 am – 9:15 am	<p>Welcome and Opening Remarks</p> <p><i>Lily Li-Wen Hsu, APEC Senior Official and Director General, Department of International Organizations, Ministry of Foreign Affairs, Chinese Taipei</i></p> <p><i>Wayne Yeong-Junaq Wang, Director General, Department of Planning and Evaluation, National Science Council, Chinese Taipei</i></p>
9:15 am – 9:30 am	<p>Introduction and Overview</p> <p><i>Mr. Stanley Goosby, Chief Scientist, Pacific Disaster Center</i></p>
9:30 am – 10:00 am	<p>Disaster Risk Assessment and Disaster Risk Reduction</p> <p><i>Speaker: Ms. Sharon Mielbrecht, Hazard Mitigation Specialist, Pacific Disaster Center</i></p> <ul style="list-style-type: none"> – An approach to disaster risk reduction – The role of risk information in reducing and managing disaster risk <p>Q&A Discussion</p>
10:00 am – 10:45 am	<p>Understanding and Assessing Disaster Risk</p> <p><i>Speaker: Dr. Heather Bell, Science Advisor, Pacific Disaster Center</i></p> <ul style="list-style-type: none"> – Key decisions and considerations – Components of disaster risk – Common information types <p>Q&A Discussion</p>
10:45 am – 11:00 am	Break

11:00 am – 12:30 pm	<p>Describing the Hazards <i>Speaker: Sharon Mielbrecht</i></p> <ul style="list-style-type: none"> – Overview of key hazards – Hazard profiling – Data collection and sources – <i>Activity</i> <p>Q&A Discussion</p>
12:30 pm – 1:30 pm	<p>Lunch</p>
1:30 pm – 2:00 pm	<p>GeoTechnologies for Hazard Mapping and Risk and Vulnerability Assessment <i>Speaker: Stanley Goosby</i></p> <ul style="list-style-type: none"> – GIS related tools – Modeling and simulation <p>Q&A Discussion</p>
2:00 pm – 3:30 pm	<p>Estimating Exposure <i>Speaker: Mr. Todd Bosse, Sr. Geospatial Information Analyst, Pacific Disaster Center</i></p> <ul style="list-style-type: none"> – Mapping hazard – Mapping elements of interest – Estimating exposure – Data collection and sources – <i>Activity</i> <p>Q&A Discussion</p>
3:30 pm – 4:00 pm	<p>Break (Group Photo)</p>
4:00 pm – 5:00 pm	<p>Regional Case Studies</p> <ul style="list-style-type: none"> – GIS analysis of flash flood and mud flow hazard mapping in Thailand, <i>Mr. Paitoon Naktae, Senior Civil Engineer, DDPM, Thailand</i> – Application of Geomatics in Natural Disaster Risk Management: case study of Yen Bai City, Vietnam, <i>Mr. Do Minh Hien, Vietnam Institute of Geosciences and Mineral Resources, Vietnam</i> <p>Q&A Discussion</p>
Evening	<p>Welcome Dinner and Reception</p>

Day 2: Wednesday, 20 October 2010

9:00 am– 9:15 am	Introduction
9:15 am – 10:45 am	Describing Vulnerability and Capacity <i>Speaker: Heather Bell</i> <ul style="list-style-type: none">– Vulnerability and capacity– Assessment methods for various elements of interest– Data collection and sources– <i>Activity</i> Q&A Discussion
10:45 am – 11:00 am	Break
11:00 am – 12:30 pm	Estimating Loss, Impact and Risk <i>Speakers: Heather Bell and Sharon Mielbrecht</i> <ul style="list-style-type: none">– Methods– Models– <i>Activity</i> Q&A Discussion
12:30 pm – 1:30 pm	Lunch
1:30 pm – 3:15 pm	Using Results to Communicate and Address Risk <i>Speakers: Sharon Mielbrecht, Heather Bell and Mr. Chris Chiesa, Chief Information Officer, Pacific Disaster Center</i> <ul style="list-style-type: none">– Mitigation<ul style="list-style-type: none">○ Cost-benefit assessment to prioritize projects– Preparedness and response<ul style="list-style-type: none">○ Early warning systems○ Decision support systems– <i>Activity</i> Q&A Discussion
3:15 pm – 3:30 pm	Coffee Break

3:30 pm – 5:00 pm	<p>Regional Case Studies</p> <ul style="list-style-type: none"> – Integrating gender issues into Vulnerability and Capacity Assessment: Result from the APEC Study on Women in Times of Disaster, <i>Mr. Heru Kasidi, Director for Gender Mainstreaming in Science and Technology, Ministry of Women Empowerment and Child Protection, Indonesia</i> – Design of scenario on the impact of an earthquake of great magnitude in Lima and Callao, Peru, <i>Mr. Alberto Bisbal, Technician Professional, Prevention National Director of the National Institute of Civil Defense of Peru</i> – Linking natural hazard models and public policy making – the case of typhoon/flood insurance, <i>Professor Chang, Ching-Cheng, Research Fellow, Institute of Economics, Academia Sinica</i> <p>Q&A Discussion</p>
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Day 3: Thursday, 21 October 2010

9:00 am– 9:15 am	Introduction
9:15 am – 9:45 am	<p>Hands on exercise: Getting familiar with ArcGIS Desktop <i>Facilitator: Todd Bosse</i></p>
9:45 am– 11:00 am	<p>Hands on exercise: Data collection and preparation <i>Facilitator: Todd Bosse</i></p>
11:00 am– 11:15 am	Break
11:15 am– 12:45 pm	<p>Hands on exercise: Mapping hazard and exposure <i>Facilitator: Todd Bosse</i></p>
12:45 pm– 1:45 pm	Lunch
1:45 pm– 3:15 pm	<p>Hands on exercise: Assessing vulnerability and risk <i>Facilitator: Heather Bell</i></p>
3:15 pm– 3:30 pm	Break
3:30 pm– 4:30 pm	<p>Hands on exercise: Basic cost-benefit analysis <i>Facilitator: Sharon Mielbrecht</i></p>
4:30 pm– 5:00 pm	Closing and evaluation
Evening	Farewell Dinner and Reception