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Important Deadline for 2012

Abstract and Town Hall Submissions: **8 August**

AGU NATURAL HAZARDS FOCUS GROUP NEWS
No. 7 (July 2012)

1. News from the 2012 AGU Fall Meeting

The 2012 AGU Fall Meeting will be held in San Francisco, California, from Monday, 3 December, to Friday, 7 December. Attend the 45th Fall Meeting of the Union, join more than 20,000 Earth and space scientists and students, and present your recent scientific results. The call for Fall Meeting abstracts is open till Wednesday, 8 August 23:59ET/3:59+1 GMT.

Prior to submitting an abstract, please review the full set of abstract submission [policies](#). All abstract submissions can be searched and viewed [here](#). The scientific program for the 2012 Fall Meeting will be finalized and available at the end of September. Visit the [AGU Fall Meeting 2012 Web site](#) for information on deadlines, schedules, guidelines, registration information and more!

Please contribute to one or more Natural Hazards sessions listed below.

NH001 Natural Hazards General Contributions

This session provides the opportunity for contributions that fall within the broad spectrum of Natural Hazards, but are not directly appropriate to any of the other sessions proposed for the focus group.

NH002 Advances in Landslide Hazard Research: Assessment, Monitoring, and Forecasting

Evaluating and forecasting landslide triggering conditions, surface mechanisms and impacts is challenging due to the small scales they often occupy and range of geologic settings in which they occur. This session will explore the multifaceted topic of landslide forecasting, hazard, and risk through the use of remotely sensed, field-based, and in situ investigations. Presentations may concentrate on procedures for hazard and risk assessment, model development and validation, and integration of remote sensing methodologies with field-based and in situ evaluations. The

session also invites case studies, scale analyses, and socioeconomic surveys.

NH003 Advances in Tsunami Hazard Mitigation

The most effective tsunami mitigation programs benefit from a transfer of new research and technologies into practical mitigation and preparedness efforts at the community level. Evaluating historical and paleo-tsunami information helps determine the impact and recurrence of large tsunamis for a particular source or region. Improvements made in source and numerical tsunami modeling provide communities with enhanced tsunami hazard and risk products used for evacuation and preparedness planning, and improved response during a tsunami event, including development of real-time, warning products for communities. Lessons learned from the 2011 Tohoku-oki tsunami are being reviewed in order to make improvements to tsunami mitigation programs worldwide.

NH004 Asia-Pacific Region Global Earthquake and Volcanic Eruption Risk Management (G-EVER)

Recent disasters in the Asia-Pacific region highlighted an importance of scientific research on disaster risks and risk management. The research on and reduction of disaster risks due to natural geohazard events like earthquakes, tsunamis, and volcanoes will be discussed at the session. Any related activities, such as, natural geohazard mitigation, international collaborations, sharing resources, making information about risks from earthquakes and volcanic eruptions, risk management, and outreach programs to citizens are welcome in this G-EVER session.

NH005 Assessing the Vulnerability of Buildings to Tsunamis and Implications for Evacuation Planning

The 2011 Tohoku tsunami demonstrates how destructive tsunamis are to buildings. Sound approaches to assess building vulnerability are needed as communities attempt to understand potential impacts of future events and to develop evacuation strategies. Attempts have been made to quantify the vulnerability of structures to tsunamis, including the development of new fragility curves and index-based methods. These approaches need to be further developed, cross-compared and validated. This session invites contributions from experts in engineering, planning, risk management, and modelling to discuss building vulnerability to tsunamis, as well as implications for alternative evacuation planning decisions.

NH006 Assessment, Monitoring and Abatement of Naturally Occurring Asbestos Hazards in the Western U.S.

NOA is found locally throughout the western United States and is common in the ultramafic and mélangé terrains of Northern and Central California in the Coast Range and Sierra Foothills. Recognition of the hazard posed by NOA has grown dramatically within the last 10 years with large amounts of effort being spent by field geologists, testing laboratories, industrial hygienists, regulators and others to assess, monitor and abate the problem. It is proposed to obtain speakers coming from these disciplines as well as various government agencies (USGS, CGS, EPA, CAL-EPA, CAL ARB, DTSC, Calif. AQMDs) to discuss the field geology, sampling, laboratory testing, and regulatory issues involved.

NH007 Coastal Inundation for Present and Future Climates

Coastal zones are subject to increased inundation risk due to storm surge, tsunami, and climate induced changes in sea level rise (SLR) and cyclone intensity/frequency. Coastal sustainability hinges on sound scientific understanding of the hazards (cyclone, surge, tsunami, climate change impacts on tropical cyclone and SLR) and their effects on coastal inundation. This session will bring together scientists and end users working on the coastal inundation and various hazards to share the latest research advances and to enhance interdisciplinary collaboration. Topics include modeling and observation of storm surge, tsunami, climate change impacts on cyclone and SLR, and coastal inundation for present and future (next 20-100 yr) climates.

NH008 Correlation and Coupling from Underground, Surface, to the Ionosphere

This session focuses on the correlation and coupling among signals measured in underground laboratories, on the Earth surface, and in the sky. Relevant measurements and analyses among seismic, rock mechanical, hydrochemical, electromagnetic, atmospheric, ionospheric and other processes and phenomena can contribute to a deeper understanding of the mechanisms and forces involved in seismic, volcanic, and other natural hazards. This session invites contributions from all geoscience communities dealing with signals that are observed before, during, and after earthquakes and to quantify the intrinsic couplings between processes.

NH009 Geohazards and Disaster Risks in the North Pacific Region

The Kamchatka-Aleutian-Alaska region is at high risk of extreme geophysical events. During the last century, the region has experienced M>9 earthquakes, tsunamis that obliterated whole towns, and VEI>5 explosive volcanic eruptions, all arising from the Pacific tectonic plate subduction beneath North America and Asia. We welcome contributions on regional geohazards arising from subduction; application of satellite remote sensing techniques and advanced in situ monitoring techniques for earthquakes, volcanoes, and tsunamis; feasibility and benefits of real-time geophysical data sharing; ash hazard to aviation.

NH010 Global Drought Information System and Global Food Production Security

The WCRP-GEO Global Drought Information System (GDIS) workshop began construction of the Global Drought Information System, the first stage of a Global Drought Early Warning Framework, for completion within 2 years, with Real-Time Global Drought Monitoring, along with pilot projects of drought forecasting--to enhance food security, starting in West Africa and the Horn of Africa. This session explores: 1) real-time drought monitoring at the global level; 2) how global food production monitoring capability can be nested within global drought monitoring and forecasting; 3) monthly and seasonal drought forecasting at regional to global scales; and 4) role of remote sensing and new technologies.

NH011 Interdisciplinary Approaches to Recent Natural Hazards - Ecological and Societal Significance

This session will deal with new findings and lessons from recent natural hazard events. In particular, the session will address the objectives of the USA NSF RAPID funding program and other national and international programs to understand and forecast natural hazards. The session will invite interdisciplinary papers on field surveys, remote sensing, observations, laboratory experiments, and numerical modeling to assess the impact of natural hazards and

disasters.

NH012 Land-Level Lowering of Flat Areas: Monitoring and Modeling of Natural and Human-Induced Processes

Lowering of land elevation is a major hazard in flat coastal areas and in inner sedimentary plains. Surface movement is caused by natural processes such as tectonics and consolidation of shallow sequences, and by anthropogenic activities like fluid pumping from the subsurface and drainage of reclaimed areas. We invite contributions exploring the integration of advanced measurement techniques with state of the art models. The aim is to exchange and discuss new methodologies and applications in this field of science. The focus is on the quantification of the earth surface movements and the determination of the driving processes to provide reliable predictions and risk assessments

NH013 Land-Ocean-Atmospheric Interaction Processes: Implications for Natural Hazards

Recent earthquakes, tsunamis, volcanic eruptions, El Nino, hurricanes, floods, landslides, dust storms and coastal erosion have shown strong coupling between land-ocean-atmospheric interaction which is responsible for changing planet Earth activities influencing human population, ecosystem and natural resources. We invite papers dedicated to Earth system sustainability and land-ocean-atmospheric interactions which are closely related topics of cross-cutting activities addressing issues of the advancement of typology, data bases and modeling, as well as capacity building and stakeholder involvement.

NH014 Landslide Triggering Mechanics: Hydrological, Geotechnical, and Geological Approaches and Heir modeling

This session will focus on landslide triggering mechanism from hydrological, geotechnical, geological, and geomorphological aspects. Targeted landslides are the ones induced by earthquakes, extreme rainfalls, creeping, anthropogenic causes, etc., and from small to large scale, located on the earth, other planets and satellites. This session seeks to explore the state of the art as well as most advanced achievement in research on dynamics of landslides. Presentations may concentrate on laboratory / field, field experiments, model and simulation, as well as validation, and evaluation of proposed models. This session also invites case studies, scale analyses, and socio-economic surveys.

NH015 Meteotsunamis and High-Frequency Sea-Level Phenomena of Meteorological Origin

The session will address a worldwide research on meteorological tsunamis and similar high-frequency sea-level phenomena, boosted recently through the NOAA/NWS funded project on the U.S. meteotsunamis TMEWS. The session will include all aspects of the phenomena, from hazard assessment, analytical and numerical process-oriented studies of the source in the atmosphere and energy transfer to ocean waves, towards vulnerability of coastal regions and risk assessment that can be used in early warning systems. The presentations on similar phenomena which may have a resemblance to meteorological tsunamis are encouraged.

NH016 Multi-Sensors Observations of Pre-Earthquake Signals and Their Connection with Major Seismicity

We propose to discuss multi-sensors observations and multidisciplinary research to investigate

pre-earthquake phenomena preceding major earthquakes. The observational data from the last twenty years suggests the existence of pre-earthquake phenomena preceding some of the major earthquakes. The recent major earthquakes provided new evidence for a distinct coupling between the atmosphere and the ionosphere, which are related to an enhanced tectonic activity. Topics include case studies related to investigating major earthquakes, statistical theory of precursor validation, and a theory relating earthquake process to electrical, electromagnetic, electro-chemical and thermodynamic processes

NH017 Probabilistic Approaches for Tsunami Hazard Assessment

The aim of this session is to provide an overview of current research related to probabilistic tsunami hazard assessment. We invite presentations that cover a broad range of topics, from probabilistic description of tsunami sources, over efficient calculation of tsunami propagation scenarios and transparent treatment of uncertainties, to presenting hazard results effectively and assuring that they have an impact in terms of risk mitigation. Topics of special interest include: Methodological development; Case studies; Discussions of probabilistic methodology to describe different tsunamigenic phenomena; Triggering of submarine landslides by earthquakes and its implications for tsunami hazard assessment

NH018 Remote Sensing and Modeling Resources for Airborne Dust Research over the Pan-American Region

We invite presentations demonstrating new, existing, upcoming resources, capabilities, interactive tools, web mapping, decision support and public health systems for study and advancement of airborne dust research globally with special focus over the Pan-American region. Aeolian dust research using aerial, unmanned aerial vehicles, satellite observations and modeling simulations (forecast and outlooks) that are specially tailored for dust and wind research and Online web mapping solutions are invited. Presenters may also exhibit ground network of stations collecting physical, biological and chemical data on dust such as dust samplers (PM1, PM2.5, PM10), sun-photometer, and Lidar systems.

NH019 The March 2011 Tohoku-oki Tsunami, Japan

The Mw 9 earthquake of 11 March 2011, the largest to strike Japan in recorded history, caused a devastating tsunami on the NE coast of Honshu Island that flooded inland up to 5 km with runup of up to 40 m. The earthquake and tsunami are the best geophysically recorded events to date because of seismic and geodetic networks, tide-gauges and offshore GPS buoys, and other data. There is a large database of runup heights, deposits and morphological changes in Japan and far field locations. We invite oral and poster submissions on all aspects of the tsunami; local and far field data, sedimentary evidence, novel techniques, tsunami modeling, and comparisons with past events. We encourage submissions on the integration of modeling and field observations.

NH020 Weathering Natural Hazards

As the annual costs of severe weather events grow into the billions of dollars, companies and communities are examining how best to plan ahead to protect their assets and bolster their bottom line. This session explores implementation of effective strategies and designs for hazard preparedness and mitigation and disaster management worldwide. Topics will include best

practices in private sectors and at local and federal levels in risk assessment and management, hazard preparedness and mitigation, critical infrastructure, and the economic and community benefits of being better prepared.

NH021 White Lecture

This session features a lecture to be presented by the Winner of the 2012 AGU Natural Hazards Focus Group Gilbert F. White Distinguished Lecture Award.

NH022 Wildfires on landscapes: theory, models, and management

Wildfires around the globe vary in their timing, frequency, intensity, extent, and effects, and are subject to varying spatial and temporal controls. This session examines theory, models, and empirical studies in wildfire research. We explore emerging theory explaining spatial and temporal controls on wildfire size and severity, wildfire patterns along ecological gradients, and scaling laws in fire regime attributes. Similarly, we explore empirical studies and models that reveal important spatial and temporal controls and their interactions, and suggest management approaches that can influence future wildfire behavior and maintain fire-resilient landscapes in a rapidly changing climate.

2. Winner of the first Gilbert F. White Distinguished Lecture Award

The Award Committee chaired by Susan Cutter (University of South Carolina) and represented by John Eichelberger (U.S. Geological Survey), Kerry Emanuel (Massachusetts Institute of Technology), Upmanu Lall (Columbia University), Mary Lou Zoback (Stanford University), and Ilya Zaliapin (University of Nevada Reno, ex officio) announced its decision on the winner of the AGU Natural Hazards Focus Group Gilbert F. White Distinguished Lecture Award. The Lecture Award goes to **Dr. Ross Stein**, U.S. Geological Survey, for *his outstanding contribution to basic knowledge of seismic hazards*. The presentation of the award certificate will be made at the Ceremony before the Gilbert F. White Lecture at the 2012 AGU Fall Meeting in San Francisco, California, USA.

3. Winner of the 2012 Graduate Research Award

The AGU Natural Hazards Focus Group Graduate Research Award went to Mr. **James Belanger**, PhD Candidate at the School of Earth & Atmospheric Sciences, Georgia Institute of Technology. The award is given for *his original research on understanding and assessing the predictability of hurricanes*. The Award committee has emphasized substantial creativity, originality, and maturity of the work and recognized Mr. Belanger's potential to become a leader in the meteorological hazard field.

4. Call for abstracts for the GRC Conference "Extreme Natural Hazards and Their Impacts"

The first GRC Conference (GeoRisk2012) on Extreme Natural Hazards and Their Impacts will be held on the campus of Chapman University, Orange, California from 8 to 12 December 2012

immediately after the AGU Fall Meeting in San Francisco. The conference is organized by the International Union of Geodesy and Geophysics and co-sponsored by AGU and Chapman University. Contributions on all aspects of Natural Hazards are invited for Oral and Poster presentation. More information at webpage: <http://www1.chapman.edu/~rsingh/GeoRisk2012>.

If you require U.S. visa, please submit your abstract at the earliest so that a letter of invitation is sent to you promptly after that. Please note that sometime the decision on visa application may take up to several months.

One can reach Orange via Los Angeles, only 50 miles or directly through US airports to Santa Ana (John Wayne) airport, its airport code is SNA.

If you have any question, please contact Ramesh Singh, Chair of GeoRisk2012 (GeoRisk2012@chapman.edu or rsingh@chapman.edu).

5. ENHANS Declaration

The Partners of the Project EXTREME NATURAL HAZARDS AND SOCIETAL IMPLICATION (ENHANS) adopted the Declaration (<http://www.enhans.org/about/Declaration.pdf>) which aims to reinforce the vital link between the scientific community, national governments and the public to mitigate disasters caused by extreme natural events and to contribute to sustainable development of society. The Declaration calls for a reduction of disaster risk through scientific research on disaster risks and through risk assessments; namely,

1. a promotion of comprehensive holistic inter- and trans-disciplinary approaches to natural hazard and disaster risk research, which have to integrate knowledge from natural and social sciences, mathematics, engineering, disaster management, insurance, climate change, sustainable development sectors and other stakeholders dealing with disaster risk;
2. a help in networking existing regional research and educational centers as well as new institutions with the aim to establish regional centers of excellence in disaster risk research and management (e.g., sub-Saharan Africa, Latin America and Caribbean); and
3. a negotiation on setting up a process of assessing and synthesizing the policy-relevant results of peer-reviewed published research on (i) the understanding of the natural phenomena and the social vulnerability associated with disasters; (ii) the capability of predictive systems to disseminate timely and accurate information needed for policy and decision making; (iii) methodologies and approaches for reducing vulnerability and increasing resilience of societies; and (iv) the overall ability of societies to reduce risk (prevent, mitigate and prepare for the increasing impact of natural events). The assessment would contribute to enhance the knowledge of disaster risk at global, regional, and local levels and the awareness of the people living with risk. A high-level intergovernmental body comprising of experts on natural hazards and disaster risk analysis should be set up and undertake the assessment.

6. Final Slate for AGU elections this Fall [from EOS, Vol. 93, No. 29, 17 July 2012]

This fall, AGU members will elect leaders for the next term (1 January 2013 to 31 December

2014). The above issue of Eos provides details about the upcoming election and information on candidates for open AGU Board and Council positions as well as section and focus group secretary positions. All regular and student members who joined or renewed their membership by 1 July 2012 are eligible to vote in this year's election of AGU leaders. The election will be held electronically, and all members must have a valid e-mail address on file at AGU to receive login credentials from the company conducting the election. The polls will open on 4 September and close on 4 October. Election results will be announced in mid October, and newly elected leaders will take office on 1 January 2013.

The Natural Hazard focus group candidates are

- 1) **President:** Richard J. Murnane and Vasily Titov
- 2) **President-elect:** Upmanu Lall and Gerassimos A. Papadopoulos
- 3) **Secretary:** Amir AghaKouchak and Ning Lin

Please look at the candidate profiles and their pre-election interviews in **EOS, Vol. 93, No. 29, 17 July 2012.**

Note: Contributions to AGU Natural Hazards Focus Group Newsletters are welcome from AGU members. Please send your contributions to Ilya Zaliapin by e-mail nathazards@gmail.com or via the "Contact" page at the group Website (<http://nh.agu.org/contact/>) inserting the Subject line: "Contribution to AGU NHFG Newsletters". The contributions will be reviewed and may be shortened.

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