

5422	Nov 13, 2007 13:32:28	Andrew Giron	Inundaciones	Esta Sesion iniciará a la 1:00pm (hora este de EEUU)
5438	Nov 13, 2007 14:11:03	Andrew Giron	Inundaciones	Good morning Cameron
5439	Nov 13, 2007 14:11:50	Andrew Giron	Inundaciones	People will be logging in around 1:00 o'clock (in 50 min)
5440	Nov 13, 2007 14:12:03	Cameron Ackerman	Inundaciones	Hi Andrew, just getting logged in to make sure things are ago. I'm going to go get some coffee, but will be back 10minutes prior to the start time.
5441	Nov 13, 2007 14:12:59	Andrew Giron	Inundaciones	that sounds good.
5466	Nov 13, 2007 14:27:12	Andrew Giron	Inundaciones	Welcome Christopher
5467	Nov 13, 2007 14:28:23	Andrew Giron	Inundaciones	Cameron will be back shortly and people should login around 1:00 o'clock
5468	Nov 13, 2007 14:28:34	Andrew Giron	Inundaciones	I will be right back in a few minutes
5469	Nov 13, 2007 14:30:15	Chris Dunn	Inundaciones	I'm looking forward to this. Cam sits close to me so I will probably sit in his office at least at first to see how it is going.
5503	Nov 13, 2007 14:47:18	Andrew Giron	Inundaciones	Bienvenido Alberto
5550	Nov 13, 2007 15:00:23	Andrew Giron	Inundaciones	Bienvenido Javier
5591	Nov 13, 2007 15:11:48	Andrew Giron	Inundaciones	Welcome Ing. Almodovar
5592	Nov 13, 2007 15:12:12	Lillian Almodovar	Inundaciones	Thank you, buenas tardes a todos.
5593	Nov 13, 2007 15:15:35	Andrew Giron	Inundaciones	My name is Andrew Giron and I am with the Department of Sustainable Development in Washington DC
5594	Nov 13, 2007 15:15:45	Andrew Giron	Inundaciones	I would suggest that everybody introduce yourself that way we know who we are. The conversation will be recorded in a log file and we will create a document available through the INDM portal

				(http://www.rimd.org)
5595	Nov 13, 2007 15:21:55	Cameron Ackerman	Inundaciones	Hi my name is Cameron Ackerman (Cam is fine) and I work at the Hydrologic Engineering Center (HEC). I have been working at HEC since 1996 where I helped develop GIS methods for automated floodplain delineation. Since that time I have been an integral team member of the HEC-RAS Team (HEC's river hydraulics model) and leader of the HEC-GeoRAS GIS tools.
5596	Nov 13, 2007 15:22:01	Cameron Ackerman	Inundaciones	I have worked on flood damage studies, risk communication, hydrology, and ecosystem rehabilitation studies, but my main specialty is river hydraulics. Recently, I have performed several dam break studies and developed two flood warning and response systems using HEC-RAS, HEC-GeoRAS and ArcGIS.
5597	Nov 13, 2007 15:23:37	Chris Dunn	Inundaciones	I am the Director of the Hydrologic Engineering Center which is an office of the US Army Corps of Engineers. One of our main missions is Flood Damage Reduction. Among other things, our office develops flood damage reduction analysis software. We train people on our software and perform project work with our software, as you can see from Camerons presentation. We are world leaders in the development of other H&H software as well.
5598	Nov 13, 2007 15:24:47	Cameron Ackerman	Inundaciones	Working at HEC is a great experience because of the talented people I work with and the broad experiences we encounter. I provide training to folks all around the world through training classes, I develop software, and I work on studies.
5601	Nov 13, 2007 15:35:15	Javier Lopez Medina	Inundaciones	Hello everyone. I am a civil engineer with experience in natural resources management. I am from Nicaragua, but now I am living in California. I have worked for many years in the public services with the current Ministry of Environment and Natural Resources (MARENA) in Nicaragua. Now I am an independent consultant. I hold a Masters degree in hydraulic resources planning, and have experience and expertise in integrated water resources management and natural hazard risk reduction.
5648	Nov 13, 2007 15:39:59	Lillian Almodovar	Inundaciones	Hola, my name is Lillian Almodovar with the Institute for Water Resources, US Army Corps of Engineers in Virginia. I am an economist and water resources planner. Currently I manage an interdisciplinary team of researchers, model developers and policy analysts covering all aspects of water resources development and management.
5651	Nov 13, 2007 15:47:55	Andrew Giron	Inundaciones	Mr Cameron, while reading your documentation presented in the Forum's website I was interested in getting your input regarding the EWS system and software developed on a more general concept
5652	Nov 13, 2007 15:52:46	Cameron Ackerman	Inundaciones	Hydraulic models created in HEC-RAS were used to develop an atlas of inundation maps to query using a customized interface in ArcGIS. Multiple discharge profiles for flooding events were established and mapped on the elevation model. The functionality of the FWRS is based on river stages at stream gages located along the river system. A known or predicted stage at one or more of the gage locations is used to display the appropriate flood inundation depth grid.
5653	Nov 13, 2007 15:53:08	Cameron Ackerman	Inundaciones	The impact to infrastructure may then be determined using the flood extent and underlying base data, while estimated damages to structures and contents

				may be computed from the flood depths. The flood inundation mapping, in conjunction with the variety of base data that can be displayed concurrently, allows managers to identify potentially hazardous areas and prepare and execute flood response measures to mitigate the loss of life and structural damages.
5654	Nov 13, 2007 15:53:25	Andrew Giron	Inundaciones	For Example as you said the system developed for the San Antonio River is flexible allowing for the user to specify the Gage locations, meaning this system could be used in many other cases and regions in the Americas. My concerned is what are the capabilities of this system for the delivery of timely alerts through different medias (Radio, celphones etc..)
5655	Nov 13, 2007 15:58:40	Cameron Ackerman	Inundaciones	We did not take the warning system to that stage. This is a living piece of software and thus far we have not incorporated automated alerts. There are 2 reasons for this. The first is that thus far, the clients we have worked with have not identified the alert system that would be most beneficial for their community. The second is that automated alerts, remove the human interaction with the system.
5656	Nov 13, 2007 16:01:04	Cameron Ackerman	Inundaciones	What does happen with the system, is that when a forecast is made, a series of flood warning and response tables are activated to show the forecaster what import actions need to be taken, give the forecasted stage.
5657	Nov 13, 2007 16:10:04	Javier Lopez Medina	Inundaciones	Mr. Cam, could you tell us, how many years took to develop this EWS and how expensive it was?
5702	Nov 13, 2007 16:13:00	Cameron Ackerman	Inundaciones	There are several different stages to the development of the FWRS...Hydrology, Hydraulics, Mapping, Software development, and the collection of data. Data collection includes digital terrain model and structure data.
5703	Nov 13, 2007 16:15:09	Cameron Ackerman	Inundaciones	We've done this twice. Once on the Susquehanna River and once on the San Antonio River system. The Susquehanna System was about \$300K (5 years ago) and that included the river hydraulics modeling and floodplain mapping and software design and development.
5704	Nov 13, 2007 16:16:34	Lillian Almodovar	Inundaciones	What was the scale of the system for the San Antonio River system? Watershed, sub-watershed or a smaller unit? Is the system an option for smaller communities with limited resources?
5705	Nov 13, 2007 16:16:43	Cameron Ackerman	Inundaciones	The San Antonio, we redid the software to be more flexible and brought it into Visual Basic 2005. We spent about \$80k to do this. The data collection and modeling were all performed by the Ft. Worth District of the USACE.
5706	Nov 13, 2007 16:17:52	Cameron Ackerman	Inundaciones	The San Antonio River System about 100 miles of the San Antonio and 30 miles of the Cibilo Creek. So i would characterize this as a large system.
5707	Nov 13, 2007 16:20:04	Cameron Ackerman	Inundaciones	To utilize the Flood Warning System on another system is quite possible, because the software is generic and can be applied "anywhere". The cost to the community would be in the development of a hydraulic model and the inundation mapping. Once that was done, it would take about 5 days to process the data and set up the required tables.
5708	Nov 13,	Cameron	Inundaciones	"Process the data" means taking the

	2007 16:22:02	Ackerman		depth grids and breaking them up at different forecast locations (if necessary). Processing background data to visualize. Converting HEC-RAS model output to lookup tables in Excel. And putting together warning tables.
5709	Nov 13, 2007 16:23:32	Lillian Almodovar	Inundaciones	In terms of the response tables, I understand they were developed from input provided by emergency managers for the areas and can be customized for each particular area or region. I think this is another important component of the system and a critical one to ensure a timely and adequate response.
5710	Nov 13, 2007 16:27:59	Andrew Giron	Inundaciones	up to what degree is the GIS system involved in the data collection stage of this system?
5712	Nov 13, 2007 16:31:44	Cameron Ackerman	Inundaciones	The data collection is really the collection of the terrain data and building it from surveyed data. The collection of the data is done typically with remotely sensed data from aircraft. The model is then built using GIS software. Structure data is gathered from road side surveys with a tablet pc and then attached to structure locations or parcel boundaries which are created using a GIS or CAD system. Individual structure locations could be gathered using GPS locations without use of a GIS.
5728	Nov 13, 2007 16:56:21	Andrew Giron	Inundaciones	I would like to thank everybody for your participation in this Virtual Forum of Good Practices. This conversation will be presented as a document and posted on the Website forum's
5729	Nov 13, 2007 16:57:25	Cameron Ackerman	Inundaciones	I will be stepping away from the computer for a while. If anyone wishes to post here, I will answer questions, later. I can also be reached at cameron.t.ackerman@usace.army.mil. Thank you for your participation. --Cam
5731	Nov 13, 2007 16:58:58	Andrew Giron	Inundaciones	thanks Again to everybody and if you have any comments or sugestions on this topic or forum please fell free to post them on our "post" section of the Forum.
5732	Nov 13, 2007 16:59:23	Lillian Almodovar	Inundaciones	You can also access our website (Institute for Water Resources) for other publications on this topic. Thank you for giving us the opportunity to participate.
5733	Nov 13, 2007 16:59:28	Javier Lopez Medina	Inundaciones	ok, by

5823	Nov 13, 2007 18:03:43	Andrew Giron	Inundaciones	bienvenida Sr Gomez
5824	Nov 13, 2007 18:03:45	Andrew Giron	Inundaciones	La session Chat a concluido
5825	Nov 13, 2007 18:05:24	Andrew Giron	Inundaciones	en las proximas hora pondre un documento el cual estara disponible en el "post" de este Tema
5826	Nov 13, 2007 18:05:31	cgprieto	Inundaciones	hola a todos y todas. les queria preguntar si entre los factores que promueven la resiliencia de las comunidades consideran la importancia de los factores psicosociales y entre ellos la profundizacion de la percepcion de riesgo, la educacion y los contenidos de la informacion Claudia Gomez Prieto
5827	Nov 13, 2007 18:07:30	Andrew Giron	Inundaciones	Sr Gomez en este momento los moderadores y presentadores del caso no se encuentran online. La sesion Chat termino hace poco tiempo.
5828	Nov 13, 2007 18:08:28	Andrew Giron	Inundaciones	aun asi le pido que escriba su pregunta en el "Post" que se encuentra en la pagina donde ud encontro el icono para ingresar a esta sesion.
5829	Nov 13, 2007 18:09:27	Andrew Giron	Inundaciones	si tiene alguna duda en como escribir su pregunta dejeme saber en como le puedo asistir en esto