

## **Government Office for Science-University of Nottingham Mission to Washington DC, 15 – 21 September 2008**

### **FORESIGHT FUTURE FLOODING PROJECT USA: EXPERT WORKSHOP**

The US Army Corps of Engineers Institute for Water Resources and Engineering Research and Development Center, and Professor. Colin Thorne, of the University of Nottingham, will partner with the Atlanta based Science and Innovation office and the UK Government Office for Science, Foresight Programme, to host a workshop entitled '**Foresight Future Flooding Project USA**' between 15 and 21 September 2008, in Washington DC.

#### **Context:**

Heavy rainfall and storm surges cause risk to life and property through flooding as well as moving large amounts of debris and sediment, changing river courses and shorelines, and damaging valuable ecosystems. The US and UK face similar hazards from surface water, river, and coastal flooding. The UK's advanced skills, research and technology in flood risk management and future planning offer a significant benefit to the US in addressing the social, environmental, economic dimensions of flooding and coastal erosion.

In 2004, the UK's 'Foresight' project on future flooding and coastal erosion risks and their management evaluated how risks might change in the future due to climate change and socioeconomic development, and identified responses to future increases in flood risk that would be sustainable in terms of cost effectiveness, social justice and environmental impact (Thorne et al., 2007). Full reports may be downloaded free from: <http://www.foresight.gov.uk/OurWork/CompletedProjects/Flood/KeyInformation/Outputs.asp>

The findings have significantly impacted the way that flood risk management is handled in the UK. Specifically, a better understanding of the future challenges was achieved and the clear message was accepted across the government that a coordinated response to tackling flood risk and integration of policy and implementation was needed at a national, regional and local levels. The messages delivered by Foresight on flooding have been taken up by action agencies and stakeholders nationwide and the 2004 assessment of future flood risks was updated as part of the review of lessons learned in the floods of summer 2007 performed by Sir Michael Pitt: [http://www.cabinetoffice.gov.uk/thepittreview/final\\_report.aspx](http://www.cabinetoffice.gov.uk/thepittreview/final_report.aspx)

Further outcomes of the project, have been Foresight missions to Russia and China and the initiation of a 3-year Sino-UK study of future flood risks and their management in Shanghai and surrounding the Taihu Basin. Within the UK, the project has helped to guide research at British Universities, including the launching of the EPSRC Flood Risk Management Research Consortium and the NERC Flood Risk from Extreme Events programme with a combined funding investment of over £20 million.

The establishment of a US/UK collaborative exchange will further raise awareness of the potential for increases in flood risks globally, while strengthening the understanding of the issues, especially with respect to recognising the hazards that climate change and relative sea level rise may pose.

## **Aims**

This informal workshop, which will include 40-50 people, will seek to:

- Showcase UK experience and technologies that were gained through the Foresight study of sustainable Flood and Coastal Defence, including the impact on flood risk and coastal erosion over a long timescales;
- Build upon an existing effort to develop an MOU which is being pursued by the U.S. Army Corps of Engineers and DEFRA/EA.
- Brief US experts on methodology and findings of the Foresight Future Flooding project and ways of pursuing such a project in the USA.
- Engage and exchange experiences with US experts and stakeholders responsible for engineering, management and policymaking in the field of integrated flood risk management, including climate change.
- Discuss the UK/ US experience in flood management and initiate a discussion on possibilities of developing a project in partnership with British academics and consultants.
- Identify possible mechanisms for research cooperation and exchanges in implementation of the Foresight methodology in the USA.

## **Programme**

The US Army Corps of Engineers and Atlanta SIN will host a workshop to highlight UK flooding experience and expertise. Twelve UK experts will share their technical and practical knowledge regarding flooding and coastal defence, and explain the future risks to people, property, infrastructure and the natural environment.

## **Outputs and outcomes**

UK scientists and engineers will share expertise with Federal and State stakeholders including the US Army Corps of Engineers, the Federal Emergency Management Agency, the National Oceanic and Atmospheric Agency, the Association of State Flood Plain Managers and the National Association of Flood and Stormwater Management Agencies.

This opportunity to bring together UK experts and US officials will foster a mutually accepted knowledge base and will be sustained through continued dialogue with the US Army Corps of Engineers.

Additional opportunities will arise for UK experts to participate on priority areas, including preparation and planning for the imminence of flooding related to global warming and climate change.

Long term collaboration between the UK and US will, in turn, reduce the risks of flooding and coastal erosion to people, property, infrastructure and the natural environment through provision of integrated flood risk management, involving a sustainable portfolio of structure and non-structural measures.

Reference: Thorne, C.R., Evans, E. P. and Penning-Rowsell, E., 2007. *Future flooding and coastal erosion risks*. London: Thomas Telford.