

## ***New International guidance set to improve levee design construction and operation***

In 2008, several governments recognized the need to participate in a collaborative international project to produce a single, authoritative reference source on the design, construction and management of levees, drawing on the skills found across Europe and USA. The resultant International Levee Handbook (ILH) was launched in October 2013 and is now available.

**The International Levee Handbook offers international good practice on levees based on current knowledge and experience from six countries in one single comprehensive handbook.** This 1400 page handbook provides a guide to the evaluation, design, construction, implementation, maintenance and management of levees. The ILH has been well received internationally as well as in the six participating nations (USA, Germany, Netherlands, France, UK and Ireland).

The handbook has been written by a core team of experts and practitioners from the full range of relevant disciplines drawn from the partner countries. The effort in the U.S. was led by US Army Corps of Engineers (USACE) in collaboration with several professional organizations, levee stakeholders and academia. United States Society on Dams (USSD), Association of State Dam Safety Officials (ASDSO), American Society of Civil Engineers (ASCE), National Association of Flood and Stormwater Management Agencies (NAFSMA), and Deep Foundations Institute (DFI) fully support and endorse the ILH. We regard the handbook as an important document in levee safety for reference in the application of international codes and manuals. The handbook is a non-prescriptive reference intended to be used in conjunction with national, state and regional guidelines, and technical standards, such as those published by USACE, to provide decision support and guidance.

The principal objective of the handbook is to provide a comprehensive and definitive guide to good practice in the evaluation, design, implementation, maintenance and management of levees. The handbook contains information that is useful for both existing and newly designed levees, riverine, coastal and estuarine. The handbook takes a risk, performance and systems based approach. The handbook also follows a tiered approach to all aspects of managing and maintaining a levee or levee system such that concepts are applicable to levees in both urban and rural settings.

Potential users of the handbook include planners, developers, levee owners, asset managers, regulatory bodies engineers, risk analysts, designers, constructors, emergency planners and responders, environmental organizations, educational institutions and the public.

The handbook is written to assist a technically competent practitioner in a broad (but not necessarily expert) knowledge of the field of application to arrive at the best approach for a particular levee or levee system. In this regard the handbook aims to provide decision making rather than to direct it. The handbook will also seek to provide the intelligent client (i.e. a client with a technical background, but no particular specialist knowledge) with sufficient background information to understand the main issues and general procedures likely to be followed by an experienced practitioner. In addition, the handbook

provides some useful information for contractors that may be advising the levee owner or designer carrying out maintenance or new construction work.

The handbook has been written to address two major viewpoints:

- The manager of the operating authority's physical structures, who has the overall task of owning, maintaining, upgrading, adding to and disposing of its portfolio of flood and coastal levees.
- The designer who will tend to focus on the need for, design of and implementation of improvements and new works.

Jonathan Simm, HR Wallingford and Technical lead, says "The ILH has been a tremendous endeavor by a very committed team of levee practitioners and researchers. Appropriate application of the guidance in this handbook should now help to underpin long-term improvements in the management and design of levees."

Michael Sharp, USACE and Chair of Technical Editorial Team commented "The development of this handbook represents a tremendous achievement resulting in a consolidation of current good practices related to levees from around the world. In addition, this effort has resulted in the establishment of partnerships that will last for many years to come. The handbook will be a great resource for any entity dealing with levees and flood risk management."

The International Levee Handbook is available via the link [www.ciria.org/ILH](http://www.ciria.org/ILH). The following information on the ILH can be accessed through this page:

- *Purchase a hard copy of the ILH*
- *Download a copy of the handbook free of charge*
- *Listen to a series of webinars providing chapter overviews delivered by the authors of the ILH*
- *Find out more about the ILH Community of Practice*

Starting in January 2015, USSD in cooperation with USACE and other professional organizations will host monthly webinars on individual ILH chapters. The intent is to offer two webinars each month working through all ten chapters. The series will start in January and go through first part of September. Each webinar will cover a specific topic presented by lead authors of the ILH. The webinars are complimentary and open to general public. Webinar schedule and sign up details are coming soon.

