



## **AGENDA**

Stavanger, Saturday 13 June 2015, 17-19h

- 1. Context/history of Levee Working Group proposition**
- 2. Introduction of participants and their area of interest**
- 3. Objectives for the Working Group.**
- 4. Finalizing the Terms of Reference**
- 5. Next steps, (preliminary board, task sharing, milestones, next meetings)**

## **Participants:**

- |       |                       |                                                                                 |
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## **Observers:**

- |            |                    |                                  |
|------------|--------------------|----------------------------------|
| • US (obs) | Eric HALPIN        | Eric.C.Halpin@usace.army.mil     |
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| • US (obs) | Bob BEDUIN         | ?                                |

## **Excused and absent:**

- |                   |                  |                                           |
|-------------------|------------------|-------------------------------------------|
| • FR (absent)     | Jean MAURIN      | jean.maurin@developpement-durable.gouv.fr |
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| • US (obs/absent) | Michael SHARP    | Michael.K.Sharp@usace.army.mil            |

Hungary is excused.

During the general European Club meeting, Mr Polimón has announced that Spain wishes to become member of the Levee Working Group as well (many levees along Ebro river). It is not yet known who will represent Spain; for the time being, the European Club secretary Mr Escuder-Bueno attends the Working Group meeting. Some days after the meeting, Mr Ruggeri indicated that Italy is also interested.

## MINUTES

Rémy Tourment, chairman of the Levee Working Group, first of all wishes to thank the ICOLD European club board for supporting the group. He also thanks Mr. Cees Henk Oostinga (NethCOLD president) for suggesting the formation of the group during the 2014 Bali Meeting.

He then leads the participants through the agenda by means of a Power Point. He explains the history of this initiative, and allows some time for all participants to introduce themselves.

Before embarking on possible working group activities, he mentions some **critical success factors** to assure levees will become a lasting topic within ICOLD:

- Ambition and commitment
- Feasibility
- In line with ICOLD and European Club, with tangible end product with added value to ICOLD.
- Visibility

The working group should avoid too much overlapping with existing working groups or research projects (although Mr Escuder-Bueno indicates at the present moment the overlap risk is small). Broad commitment and a platform for exchange and networking were recognized as key factors.

Next some proposals were made for **key activities**. Documenting and sharing best practices seems a key activity towards a tangible lasting end product. Other activities that were mentioned are:

- linking up with other ICOLD initiatives (such as erosion Working Group)
- creating networking opportunities
- tools for knowledge sharing (or 'equalization') such as a wiki and website
- benchmarking of cases

Besides activities, key topics must be also be decided on. Rémy Tourment proposed two general topics, leading to a report with lessons and recommendations:

- Analysis of similarities and differences between levees and dams (both large and small)
- Identifying topics not yet fully covered by the International Levee Handbook

It is important to note that the **general topics** are not only about dams and levees as an object, but that the topics are as much about the way the countries deal with them.

Two key proposals are made by the participants:

- **Add a third general topic:** System approach of dams and downstream levees: how does the presence, safety and operation of upstream dams interact with that of downstream levees and flood defences, and vice-versa
- **Extend the scope and name of the working group** to include flood walls, mobile defences, hydraulic structures and transitions: proposal for a new name that is not too long: *Working Group on Levees and Flood Defences*

Next, Rémy Tourment presented a long list of **specific topics**, based on the London preparatory meeting and (*in italics*) the participants input as received before the meeting:

- European legislation (water framework and flood directives)
- European standards (Eurocodes and future revision)
- Case studies of floods including levee failures
- Safety and risk approaches (*including risk management/assessment*)
- Inspections and monitoring; remote sensing
- Failure mechanisms, related to piping, stability, revetments, transitions etc. (difference with dams to be considered); *safety/performance assessment*
- Hydraulic structures and transition between hard and soft structures
- Innovative materials
- *Ageing*
- *Systems approach*
- *Low-cost maintenance*
- *Developing an agenda of future research topics (science and/or guidance)*

The key message is to focus on one topic you want to and are able to deal with, and to decide on one topic during the meeting, and additional topics later, according to the commitment of members.

Several (additional) suggestions were made by amongst others the UK, NL, RU, D, FI, F:

- Flood walls and transitions
- Failure database
- Cost-benefit analyses to optimize protection levels
- Wave runoff and overtopping
- Assessment of existing/undocumented levees
- Compare EU Floods Directive implementation for dams and levees
- Overflowing levees and spillways

- Address the apparent mismatch between dam safety and levee safety failure requirements, given the large number of levee failure victims

The US guest attendants note that most topics are already dealt with elsewhere, and suggest advocacy for levees as a topic (advocacy for levee good practice and safety rather than building more levees).

Finally, all agree on “making the case for levees” as a key topic. Starting with some basic inventory of levees and their owners and global (safety) performance for each country. **A questionnaire will be prepared and distributed.** Please only mention the topics you will personally work on (and why they are of interest to you), and please into account that we have no funding: we need focus since many of us will have to do their job in their spare time.

Next, everyone was asked about his or her main area of expertise and especially **what each member would contribute.** This is the summary of the responses:

- Provide data and share knowledge (all)
- Hosting meetings (many people)
- Access to personal networks and other committees (many people)
- Delft University Researchers, working on an EU project (SafeLEVEE) on a levee failure database and levee failure mechanisms (**Bas Jonkman will provide details**)

Possibly also:

- Providing guidelines and case studies
- GIS systems for flood analysis and hydro-power potential

As for the **Working Group Terms of Reference**, Mr Escuder-Bueno indicates they are needed in very short notice as they are needed to formally approve the Working Group (as part of the 2016 European Club minutes). Mr **Escuder-Bueno will distribute these terms of Reference amongst the European Club and European Working Group members, and will invite them to become member of the present Working Group if interested.**

It is decided to largely adopt the preliminary Terms of Reference as sent to the European Club Board in April 2015, with only some small modifications, expressing the proposed focus on:

- an overview of facts on levees
- the website for the case studies and SafeLEVEE project
- Flood walls and Transitions

As for the next physical meeting, there are different options. The options for a second meeting in 2015 will be explored. In 2016, there are three possibilities for a meeting:

- Annual ICOLD Meeting 16-20 May in South Africa
- FloodRISK conference 17-21 Oct Lyon France (many key people have commitments there)
- European Club Symposium Antalya Turkey, 25-30 Oct

Especially the latter two seem conflicting, so **we will ask the Working Group members for their commitments and preferences.**

Final remarks and suggestions:

- Think about other sources of funding, e.g. private sector (also for training/education)
- The USACE wants to invite everyone in September to two complementary workshops, the first one during the 10<sup>th</sup> anniversary of Katrina in New Orleans on September 17<sup>th</sup> and the second on November 7<sup>th</sup>, Oakland California
- Levees and dams are different (even if similar in many aspects), this is why we need this group
- Problems related to levees are underestimated
- Many people want to catch up on information through the ILH and with the level of cooperation between the countries
- Please work together with technical groups of ICOLD
  - on erosion
  - on small dams (within the Emerging Challenges Committee of Luc Deroo)
- A working group on levees is a good platform for exchange of research
- Please do not forget governance, how flood risk management is organized and funded
- Many of us have large issues to tackle and/or new dam and levee legislation. This means a lot of structures have to be classified and managed in a different way. It is good to share experiences
- Weblinks and shared working space

In addition, the participants expressed a lot of positive feedback about this meeting; many participants were glad as they were made aware of the International Levee handbook at <http://www.ciria.org/ILH> (note there are also ILH webinars available).

Rémy Tourment then closed the meeting, while thanking all for joining the meeting and while expressing specific thanks to Mr Escuder-Bueno and the Board of the European Club (for approving the Working Group) and Mr Oostinga (for initiating the group and asking him to become chairman).

### **SUMMARY OF ACTIONS**

#### **Rémy Tourment/ Marcel Bottema**

- *Send minutes and Terms of Reference to Mr Escuder-Bueno and to Working Group participants*
- *Distribute Power Point of meeting amongst participants*
- *Distribute questionnaire about topics of meeting data amongst participants*

#### **Ignacio Escuder-Bueno**

- *Approve Terms of Reference and send them to European Club members and to chairs / members of European Working Groups, together with invitation to become member of our group*

#### **Bas Jonkman**

- *Provide information/weblink of SafeLEVEE project*

#### **All**

- *Reply to Questionnaire*
- *Share relevant opportunities and information (but please do not overload our mailboxes); please let us know if you can be linking pin to existing Committees and Working Groups.*

### **ADDENDUM (issues that came up after the meeting)**

- (!) As early as beginning 2016, the National and Technical ICOLD Committees will probably be asked for suggestions about the Questions and Topics for the ICOLD2018 Congress in Vienna. An excellent opportunity to put levee-related topics on the ICOLD2018 Congress Agenda. So **please think about ICOLD2018 Congress Question/Topic suggestions we could all agree on.** For example:
  - System approach of dams and downstream levees: how does the presence, safety and operation of upstream dams interact with that of downstream levees and flood defences, and vice-versa;
  - What lessons (on failure mechanisms, maintenance, safety issues, governance..) can be learnt by comparing dams and levees and related practices?
- The present Stavanger congress already partly paved the way for the topic of levees: in summary of Question 96, reporter Luc Deroo included 8 recommendations, of which one refers to sharing experiences with flood protection dams, and another one with integrating small dams in the ICOLD scope.
- Many Technical Committees derive their success from small but focused sub-groups under the umbrella of the Committee. **Please let us know if you wish to start a small sub-group within our Working Group**, working on a specific topic.
- **Please let us know if you are member of an existing Technical Committee or Working Group and can serve as our linking pin.** Two things are relevant here:
  - Many new groups (or Committees) start their work with a request for information, if our Working Group can provide such information, we (im)prove our added value and visibility to ICOLD!
  - In recent years, many Working Groups and Technical Committees have distributed questionnaires to National Committees. Please let us know if the questionnaire responses provide information that can accelerate the progress in our Working Group.
- **Meetings of interest:**
  - 13-17 Sep 2015 US Dam Safety Conference, New Orleans, <http://www.asdso.org/> (more on the associated levee workshops, 17 Sep. in New Orleans and 2-4 Nov. in Oakland: <http://usdams.org/2015workshops.html> )
  - 29 Sep-2 Oct 2015 Hydraulic structures (and internal erosion), Warsaw [http://www.skcold.sk/uploads/media/1757\\_First\\_Announcement.pdf](http://www.skcold.sk/uploads/media/1757_First_Announcement.pdf)
  - 13-16 Oct 2015, 5<sup>th</sup> Int Symp Geotechnical Safety and Risk (ISGSR), Rotterdam, NL, <http://www.isgsr2015.org/>
  - 16-20 May 2016, Annual ICOLD Meeting 16-20 May in South Africa
  - 17-21 Oct 2016, FloodRISK conference, Lyon France, <http://floodrisk2016.net/>
  - 25-30 Oct 2016, European Club Symposium Antalya Turkey