

# Floods and Storm Water

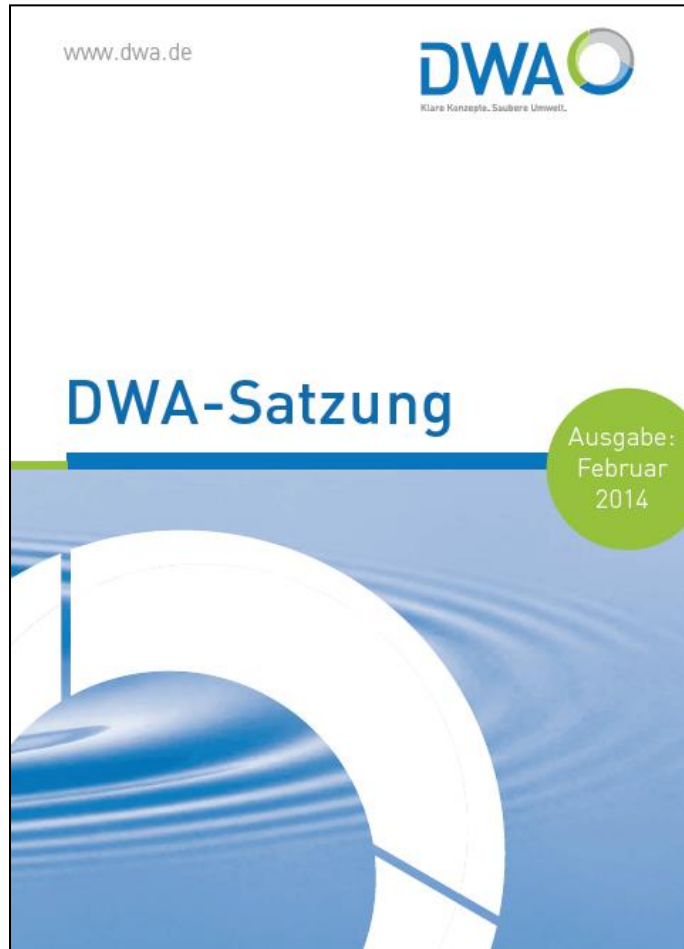


# Who are we? DWA - A Strong Community



German Association for Water,  
Wastewater and Waste

## Mission: Articles of Association



- bring professionals together
- represent the interests of water management in politics
- elaborate technical rules
- promote vocational education
- identify the need for research and transfer research results into practice
- cooperate with related organizations, nationally and internationally

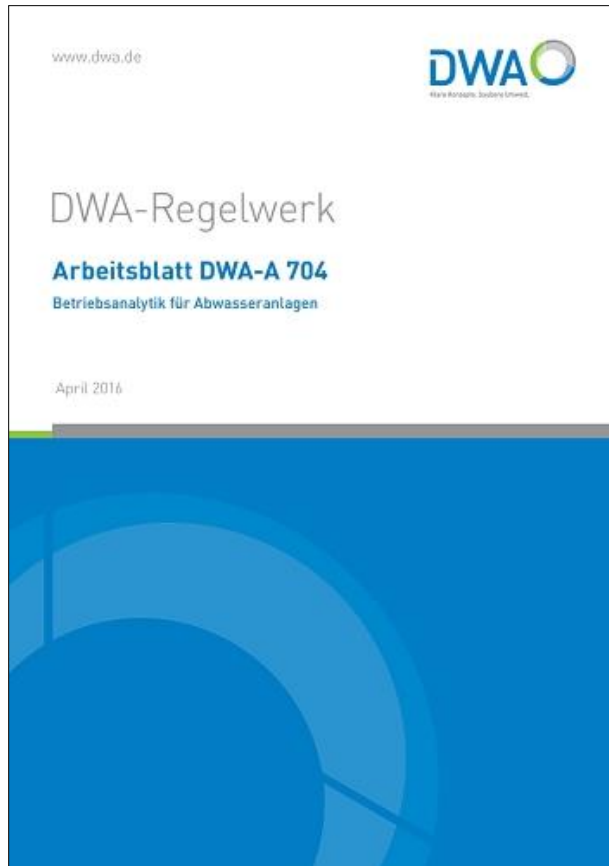
## Data: Chronicle and People



- 1948 foundation of ATV
- 1978 foundation of DVWK
- 2000 unification: ATV-DVWK
- 2004 rebranding: DWA
  
- about 14000 Members
- more than 3300 professionals working voluntarily in 339 committees
- about 140 employees (head office and seven regional sub-associations)





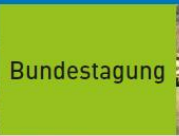
- Set of Rules: about 300 Standards and Guidelines
- journals:
  - *KA – Korrespondenz Abwasser, Abfall* and
  - *KW – Korrespondenz Wasserwirtschaft*
- other:
  - DWA Topics
  - DWA Comments
  - DWA Technical Reports
  - Software (Expert-Series)
  - Information for citizens



- 339 committees and working groups elaborate the DWA Set of Rules
- the public may participate in the development process of new or updated rules by a standardised procedure
- guests may participate in committee meetings

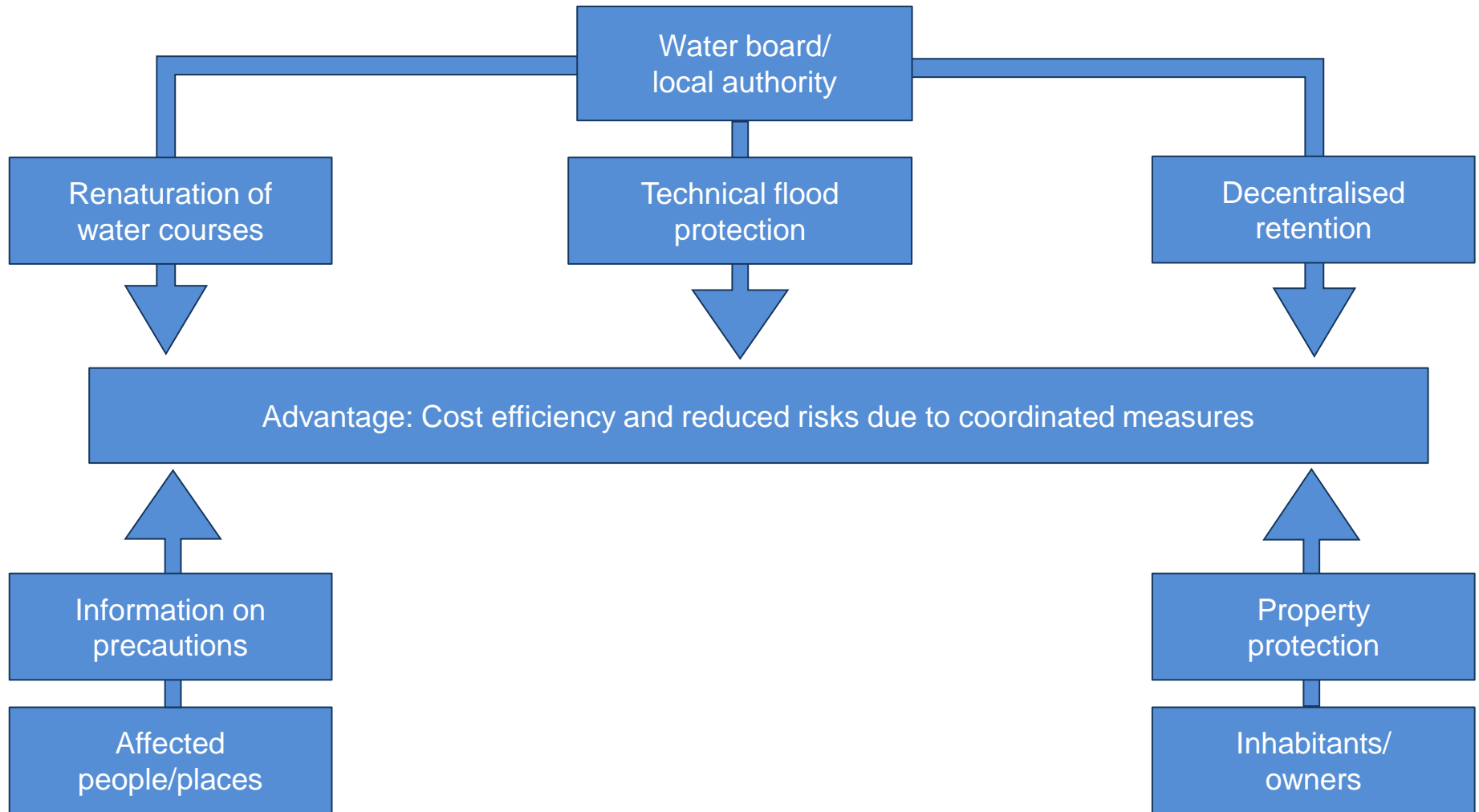
## Conferences, Trainings, Seminars Workshops, Events

**DWA-Tagungen 2016**

 Grundstücksentwässerungs- Tage 25.-26. Januar 2016, Fulda	 14. Erfurter Gespräche zur Wasserrahmenrichtlinie 26.-27. Januar 2016, Erfurt	 ERWAS – Energieeffiziente und ressourcenschonende Wasserwirt- schaft 02.-03. Februar 2016, Essen	 IFAT 2016 30. Mai - 03. Juni 2016, München
 15. Regenwassertage 05.-06. Juli 2016, Hennef	 Energietage September 2016	 Bundestagung 27.-28. September 2016, Bonn	 10. DeichTage 19.-20. Oktober 2016, Magdeburg
 Klärschlammbehandlung, WasserWirtschafts-Kurs P/4 09.-11. November 2016, Kassel	 IST – Inspektions- und Sanierungstage 22.-23. November 2016, Dortmund	 8. Hochwassertage 29.-30. November 2016, Köln	 Erfahrungsaustausch für Gewässerschutzbeauftragte November 2016, Nürnberg

- about 35000 participants per year:
  - executives
  - natural scientists
  - technicians
  - skilled workers
- euro 4-6 m. annual revenue
- nationally and internationally

# Elements of flood risk management






**Are you prepared?  
Floods, Storm Water Heavy Rainfall**

**Useful Tool Flood audit by DWA**



## Political and legal framework

- 
- EC flood risk management directive 2007
  - Federal Water Act (WHG) 2010
    - Keywords „Individual Precaution“ (§5 WHG)
  - Implementation within the framework of public service tasks at local authority level
  - Promotion of the audit in Federal States of Bavaria, Hesse and Saxony-Anhalt
  - LAWA (Working group of the federal states on water issues) – Recommendations for designing up flood risk management plans of March 2010

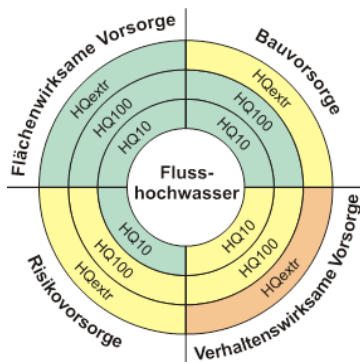
## Objectives:

- To record the **strengths and weaknesses** of the existing precautions
- To elaborate together **concrete action recommendations**
- To **support** the responsible persons at the political and public administrative level
- Clarify and verify the foreseen activities and actions to combat floodings together with the state authorities and the public.
- To create **risk awareness**

## Content:

- Questions from the fact sheet **DWA-M 551** as a guiding thread:

35 indicators for the four precaution areas:



- Land-related precautions
- Building precautions
- Behavioural precautions
- Risk prevention

- Evaluation of floods caused by rivers / streams and caused by heavy rain / storm water

# The result: Your individual flood precaution traffic lights

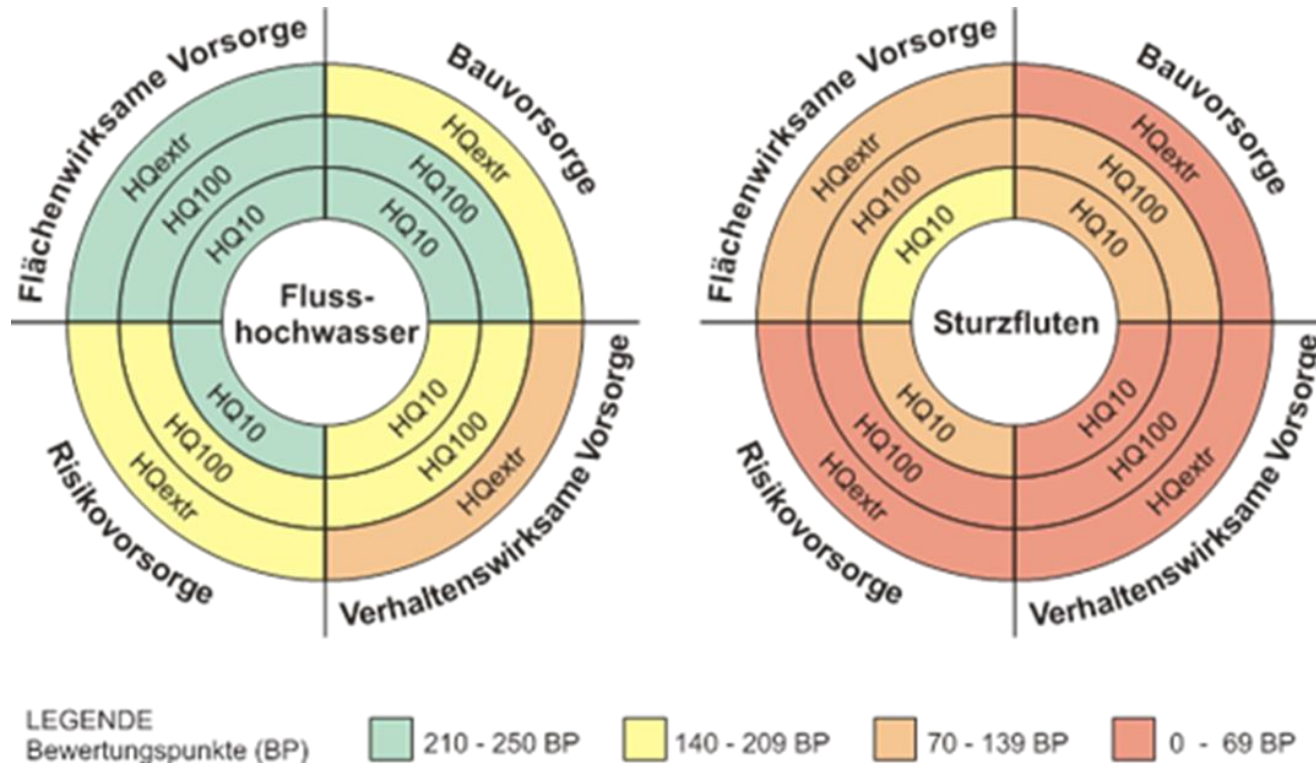




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## The benefits:

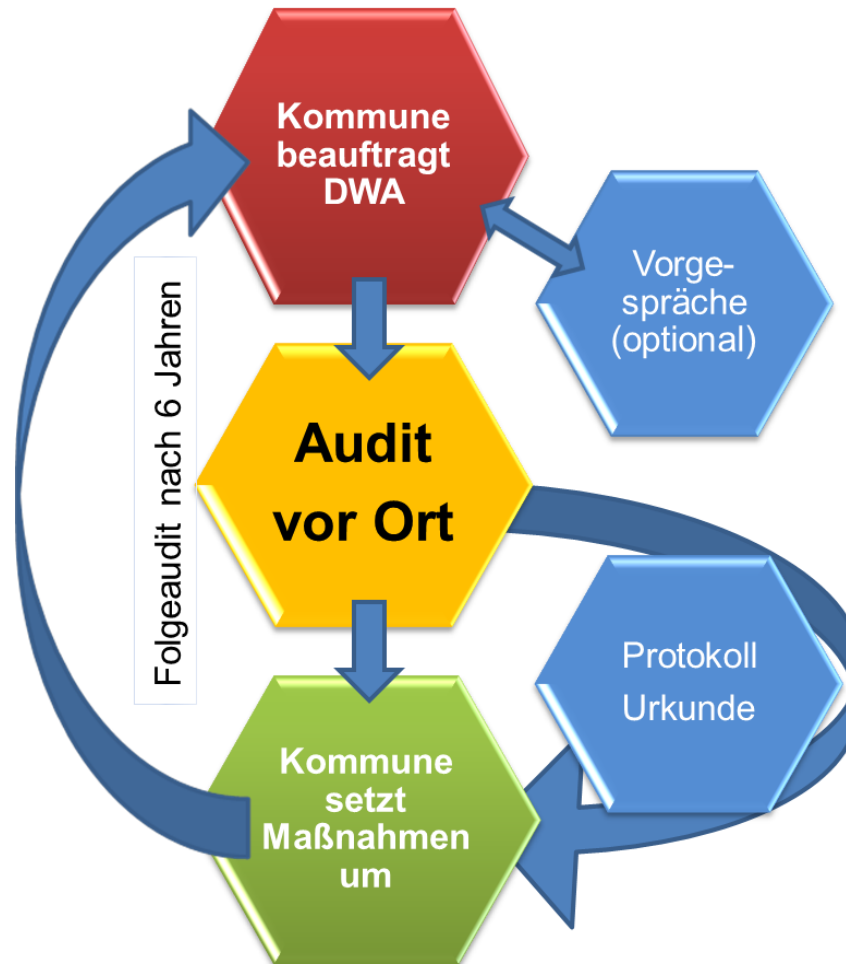
- ✓ Reduction of damage or damage potential
- ✓ Prioritisation of measures, tangible action recommendations
- ✓ Being confronted with the relevant issues due to the profound experiences of the audit experts.
- ✓ Coordinated, internal cooperation within the community
- ✓ Clear communication paths
- ✓ Improved regional and urban planning
- ✓ Networking between those who have participated in the DWA Audit.

**In brief: You are well prepared for floods and flash floods when conducting a DWA Audit!**

## Process

- Two days together with the community employees in charge and the decision makers.
- Discussion moderated by two DWA expert auditors
- Dealing with and evaluation of all aspects concerning floods directly at the 'round table'
- Shortly after the meeting submission of the minutes and the report







## *What is the alternative to the audit?*

- Wait until the next damaging floods arrive
- Be confronted with the same burning questions
- Be under pressure to **justify yourself (done a good job ???)**
- **Being in the News with sad and bad messages!**



**Thus, there is no alternative**

## The costs

Up to 25,000	residents	EUR 12,500	net
Over 25,000	residents	EUR 15,000	net
Over 100,000	residents	EUR 20,000	net
Over 200,000	residents	EUR 25,000	net

- ✓ In some Federal States the DWA is subsidized. (The administration knows that it is much more cheaper to be prepared!!)

## DWA Flood Audits in over 50 municipalities



- Due to the DWA Audit we really got started. The different departments in our administration, the fire brigade and the disaster control section are working from now on hand in hand.
- Dipl.-Ing. Dierk Bauer, Tiefbauamt Moosburg a. d. Isar
  
- The DWA Audit was an excellent tool for a quality check of our measurements.
- Marc Scheibel, Chefhydrologe, Wupperverband
  
- Due to the DWA Audit we have been made aware of yet unknown aspects of flood prevention. Now we have integrated them in our measurement catalogue.
- Hartwig Rihm, Bürgermeister a.D. Au am Rhein
  
- During the DWA Audit we have simulated different scenarios. Without the support of the experts we wouldn't have accomplished those.
- Dipl.-Ing. Cristina Pop, Leiterin Tiefbauamt Straubing

**Be prepared**

**– let's take the next step together!**

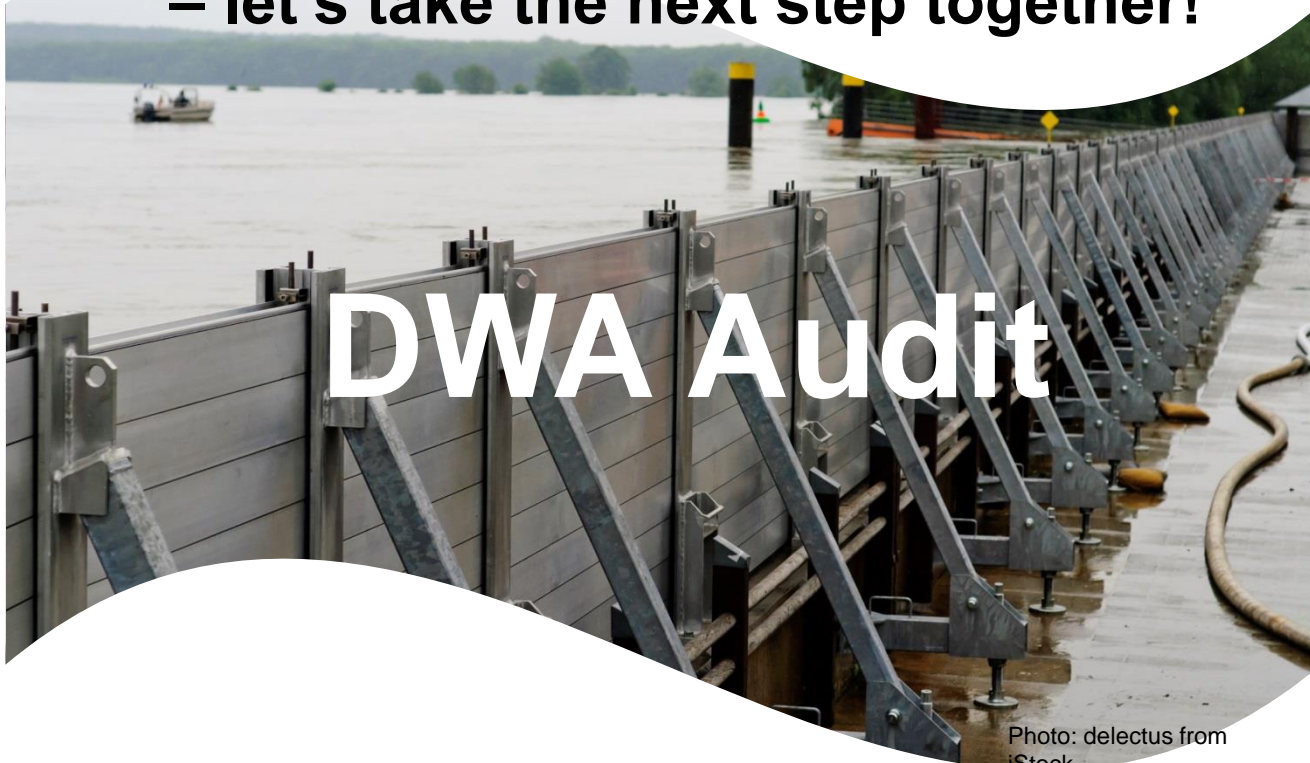


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