

Trapped between barriers OR Flowing despite barriers?

Nadine Schröder & Nikhil Chaudhary

Lunch Talk on a Scientific Comic

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Framework Directive in Germany

Environmental Engineering B.Sc./ M.Sc.

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Architect, Urban Planner, Artist

Public Policy M.A.

I compare German Cases of local WFD implementation

Cases

- Per federal state: various WFD addressees to cover strong organizational variations within a state
- Focus on surface waters and hydromorphology and connectivity measures (in contrast to chemical water quality measures)

Data collection

- Policy documents and websites
- Participatory observation in participation/ coordination processes
- Semi-structured Interviews (overall 66, Ø 2h) e.g. in Hesse with:
 - Ministry (3), technical and scientific authority (1)
 - District Government (1)
 - Municipality (2 different)
 - lower water authority (1 + a short one)
 - Waste water association (1)
 - GFG Fortbildung GmbH (1) organizes water neighborhoods
 - Nature And Biodiversity Conservation Union Hesse (NABU) (1)

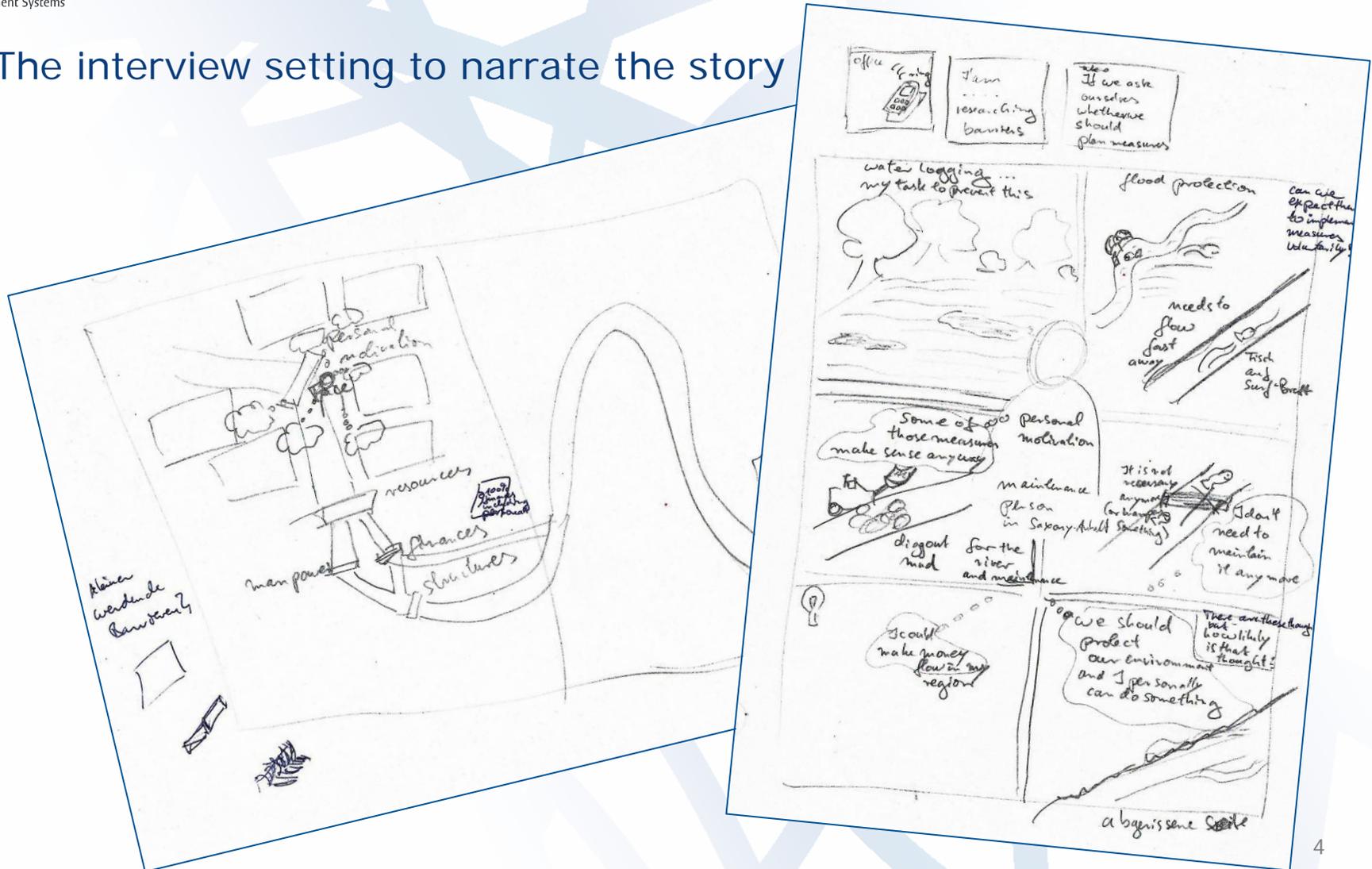
➤ **What are the barriers for local WFD implementation?**

Thoughts and experiments are illustrated here along the creation process of the comic

- The idea and initial drawing experiments
 - Storytelling
 - The audience
 - Text vs. visualizations
 - Experimenting with versions
 - Steps from the idea to the final artwork
 - Production process
 - A communication instrument
-
- Comic Workshop by Nikhil (Jan 2019)
 - 9 work meetings (April-Sep 2019) + 1 celebration meeting (Dec 2019) at various places
 - Final artwork done with German translation (13 Nov 2019), afterwards start of production process for publishing

The idea was born at the IRI Comic workshop one year ago - 17 Jan 2019

- The interview setting to narrate the story



I started with some drawing experiments on my own...

- ... and was happy that Anne wrote in February 2019 that the IRI organized funding for three scientific comic projects!
- I had no prior experiences with creating comics and the technical facilities for giving it a professional look.

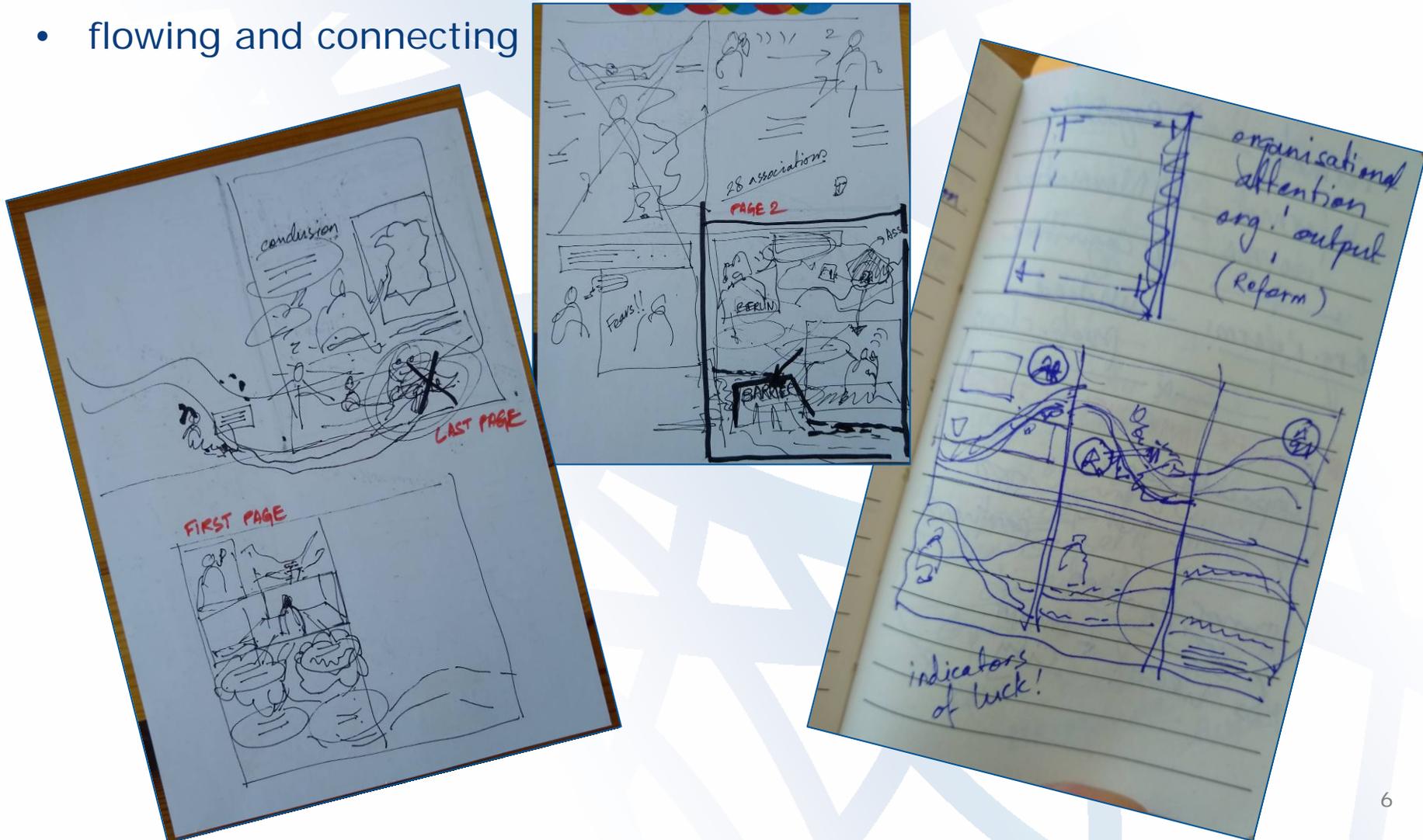


The Chance to concentrate on the story!

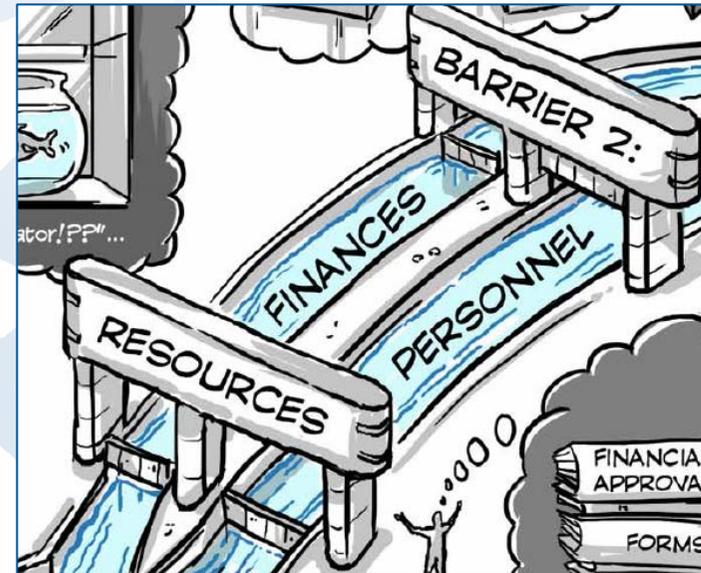
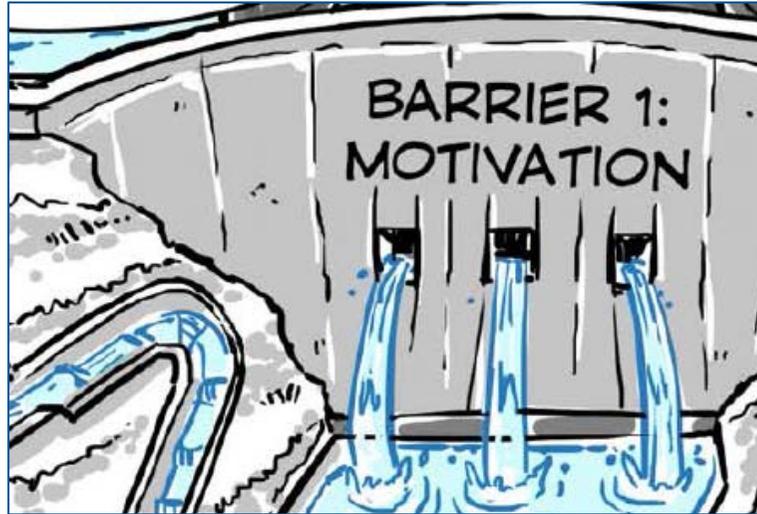
I imagined the implementation barriers as a cascade already before the comic project



- flowing and connecting

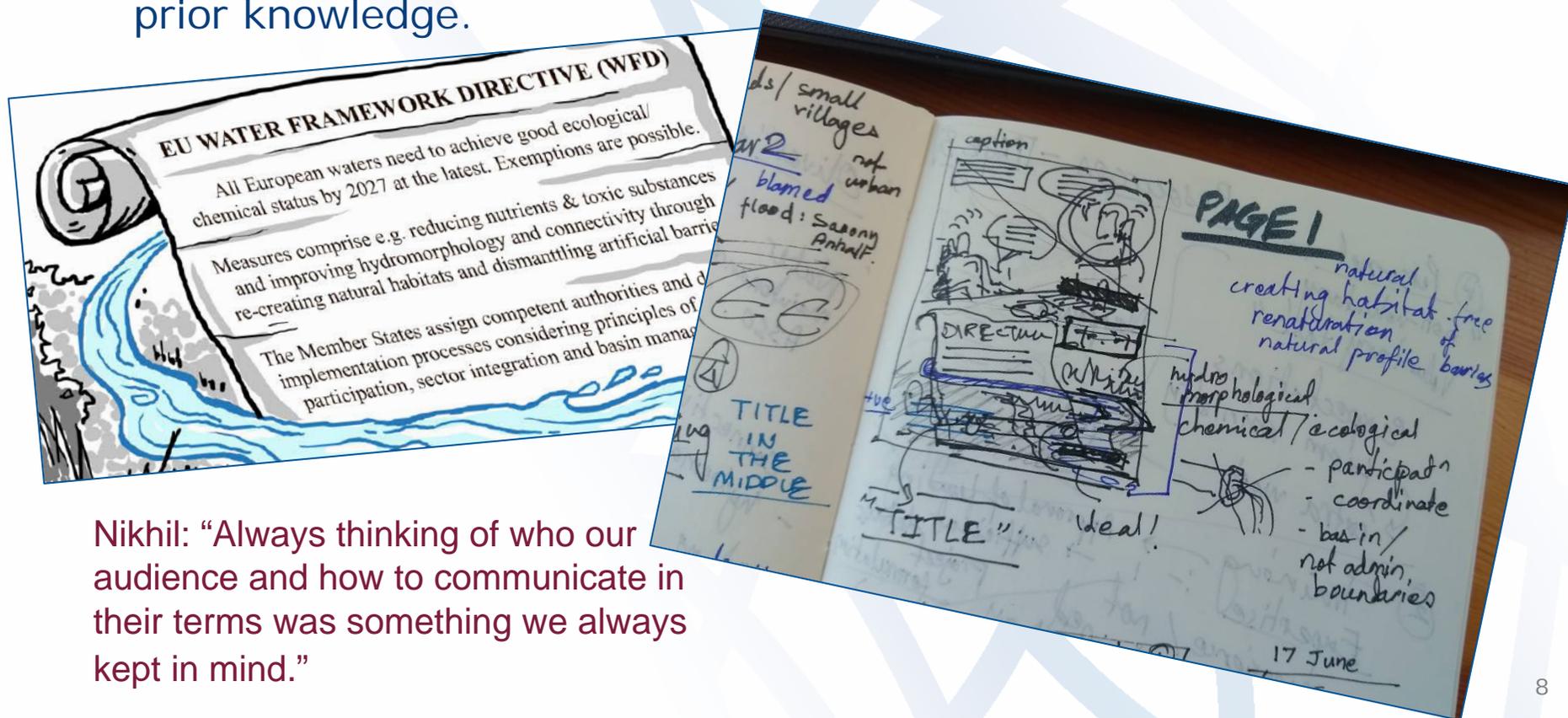


Barriers should look decreasing signalling their importance for decision-making



Who is the audience?

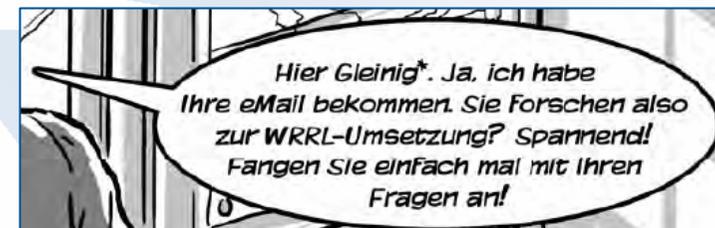
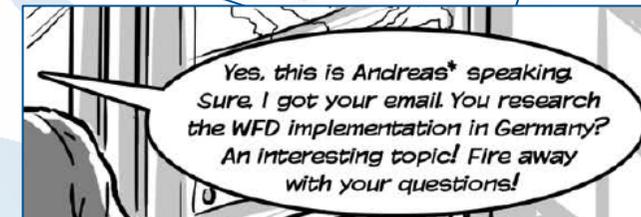
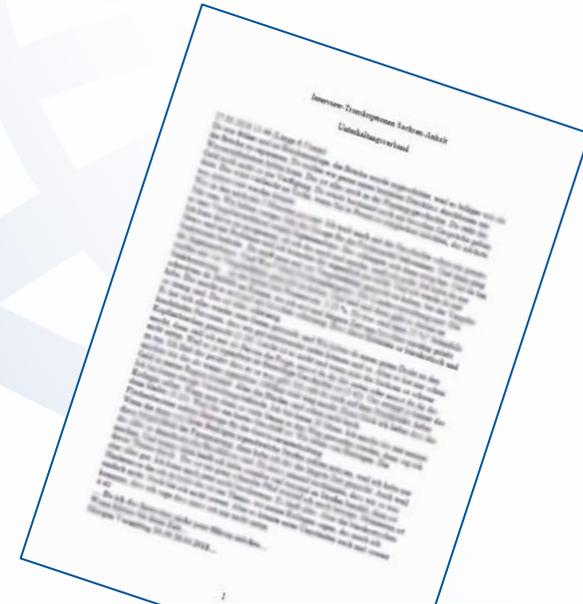
- With page 1 we needed to discuss how much background information can be given with the comic itself...
- ... and how much we need to expect to reach out for readers with prior knowledge.



Nikhil: "Always thinking of who our audience and how to communicate in their terms was something we always kept in mind."

Getting started with texting was not easy...

- Sequence of text production: page-plot and comic-script
 - How to tell the story?
 - Who can tell what? Overall insights vs. emotions and personal insights
 - How does it sound natural when the main character is ‚speaking‘?
 - How to name the character? In German and English culture?
- A transcribed interview helped with examples!



... but later it was flowing from page to page



- What is better described in text and what is better visualized?



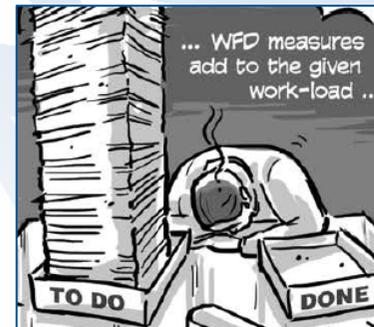
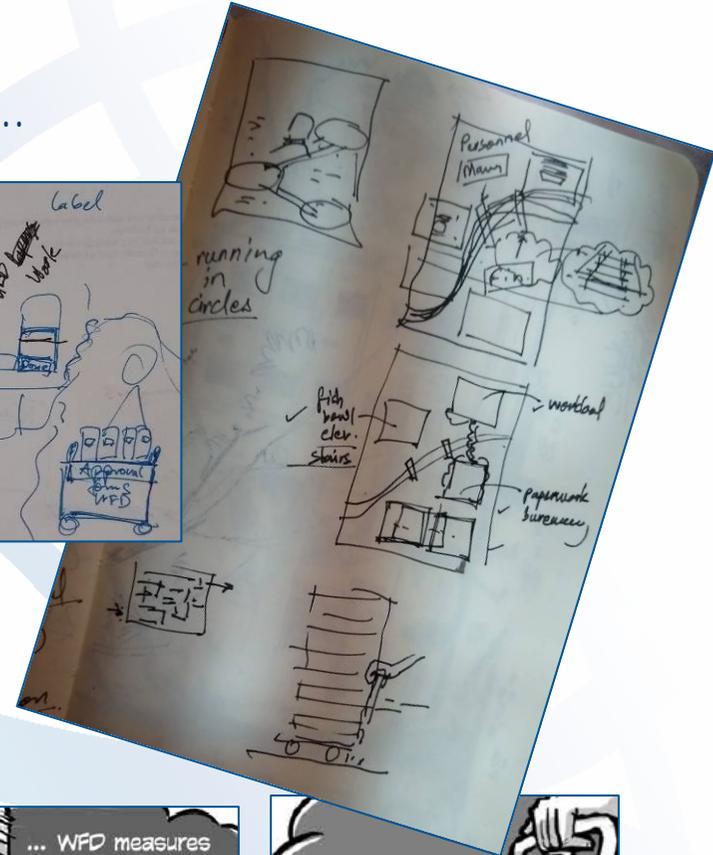
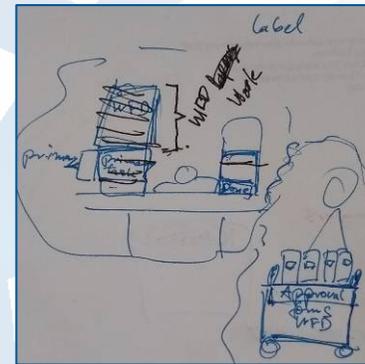
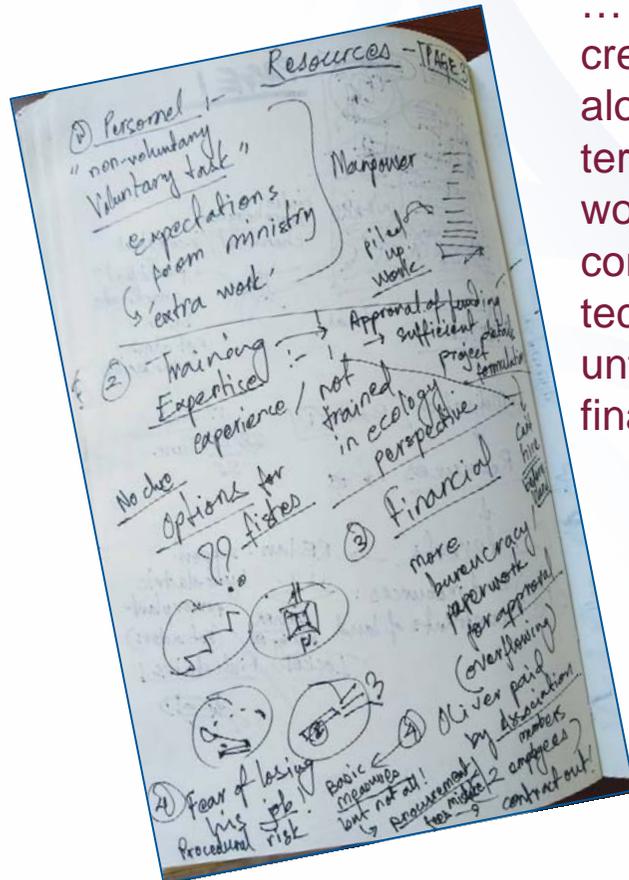
Nikhil: "We extensively used rapid prototyping, ..."



Especially abstract issues started with text before we found visual metaphors...

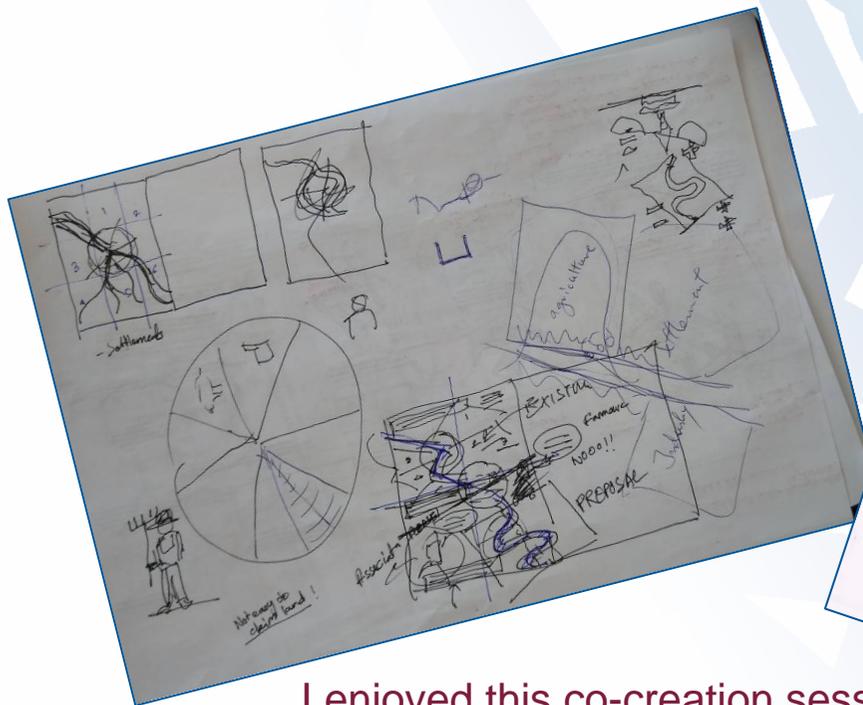
...know-how, lack of personnel, bureaucracy...

... and making creative decisions along the way in terms of what works best to communicate the technical matters - until arriving at the final form. ...



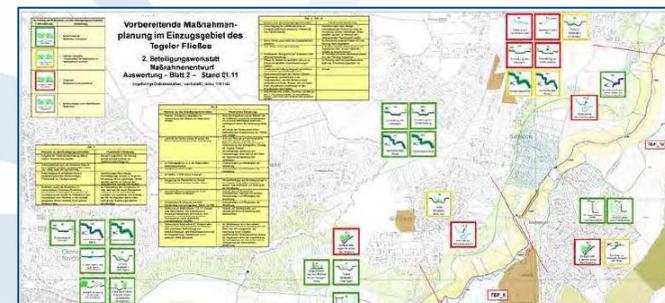
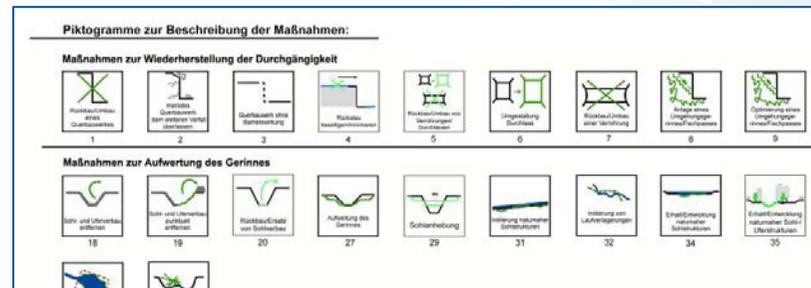
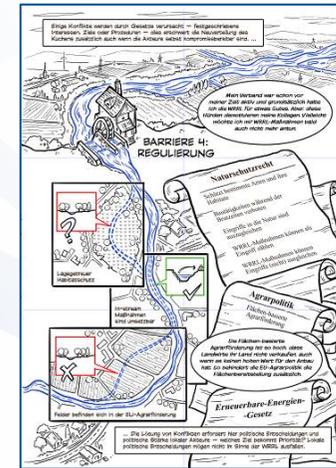
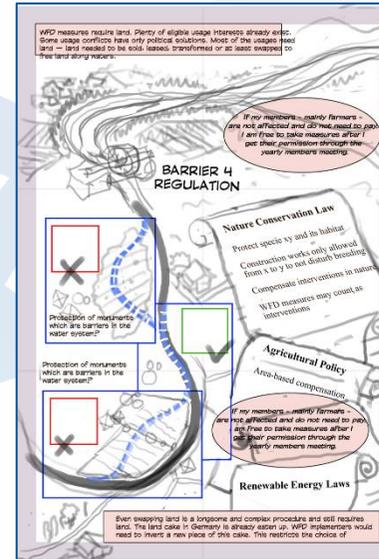
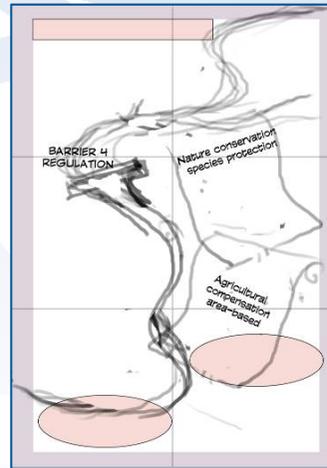
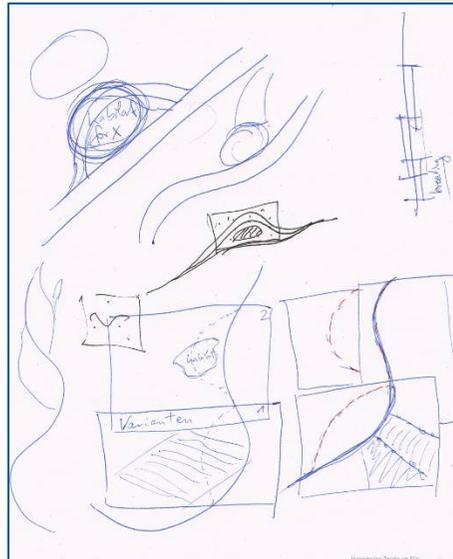
Experimenting with different visualization ideas was fun but also exhausting

- ... from statistics to visualization:
- ... Cake diagram – cake – eaten up – party with eating guests ...
- ... but how to keep a river flowing through a table?



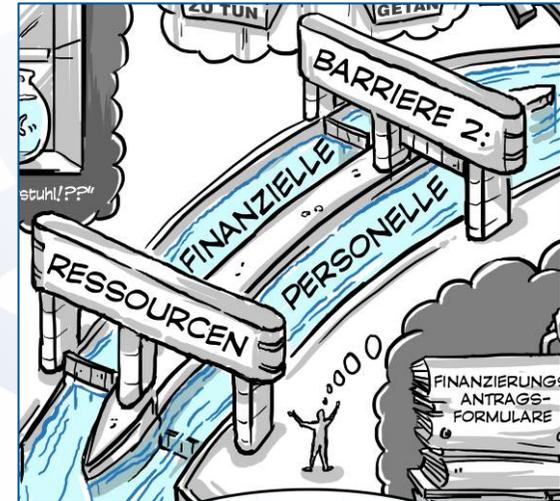
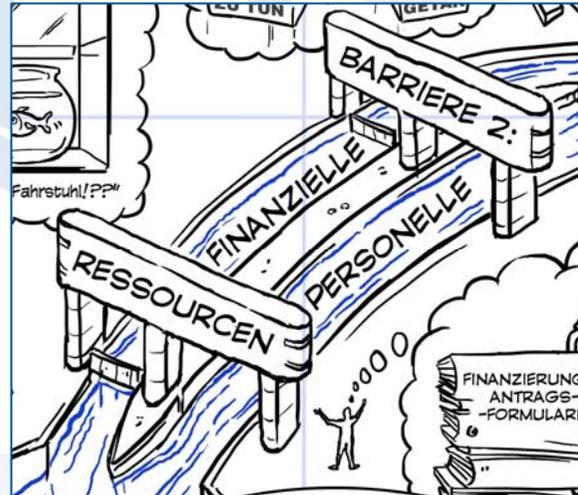
...I enjoyed this co-creation sessions a lot. This is also what is called 'design thinking' in the innovation field."

It takes several steps from idea generation and drafting to the artwork ...

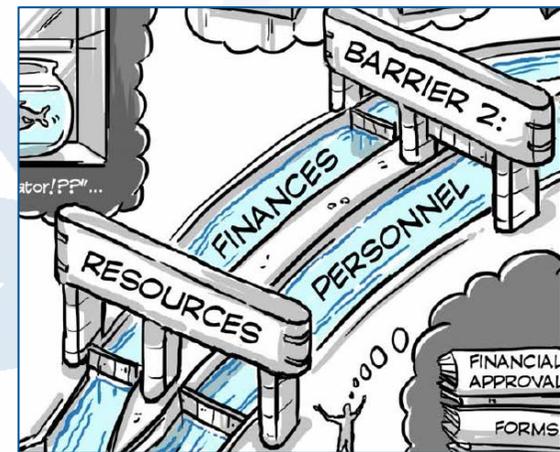
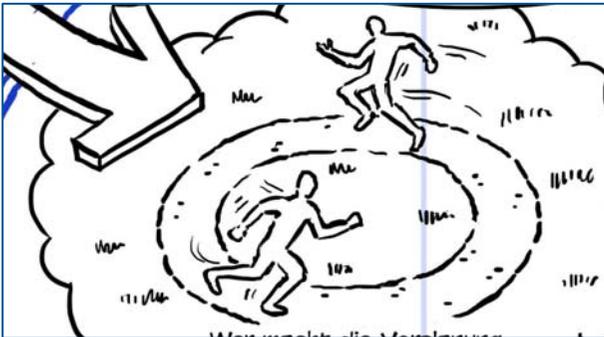


Nikhil: "There were phases when [Nadine] were more inclined to showcasing most information, whereas I was pulling the flow towards the narrative or 'story' side of things. We found a balance along the way."

... followed by revisions and colouring the artwork

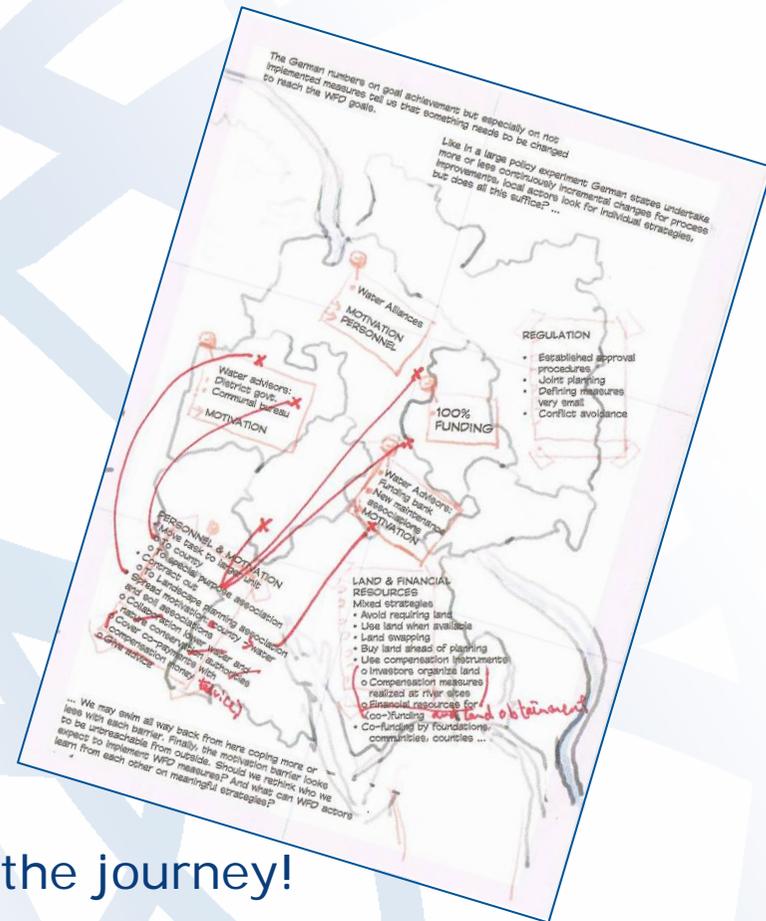
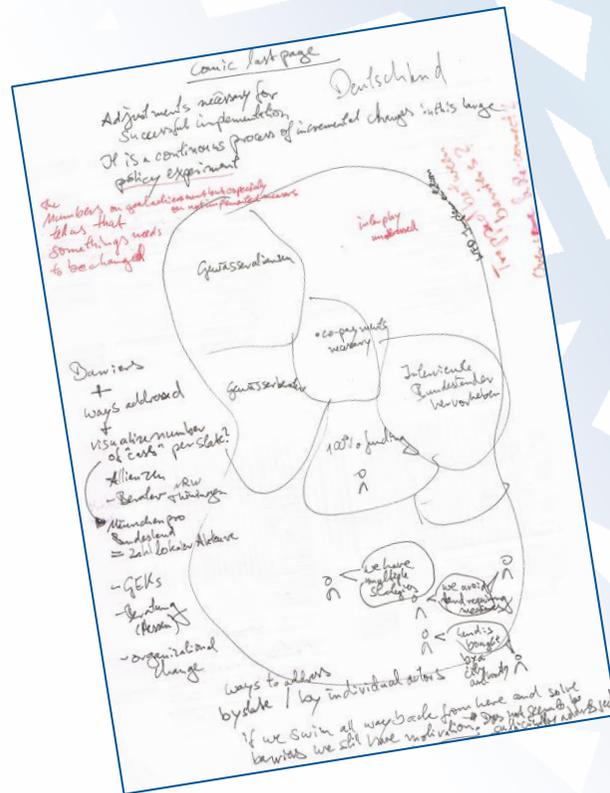


- staying the expert in ,technical' details



Finding a good end was very hard work...

- ... probably because the real life is similarly difficult



- We found the title at the very end of the journey!

The production process is similar to but not the same as for a usual paper

- Preface (by Anne Dombrowski), Abstract and Acknowledgements like in a usual paper
- Proof-reading of all written parts of the publication(s) – Thanks to Timothy Moss!
- CVs and (semi-)drawn portraits – the authors behind the comic

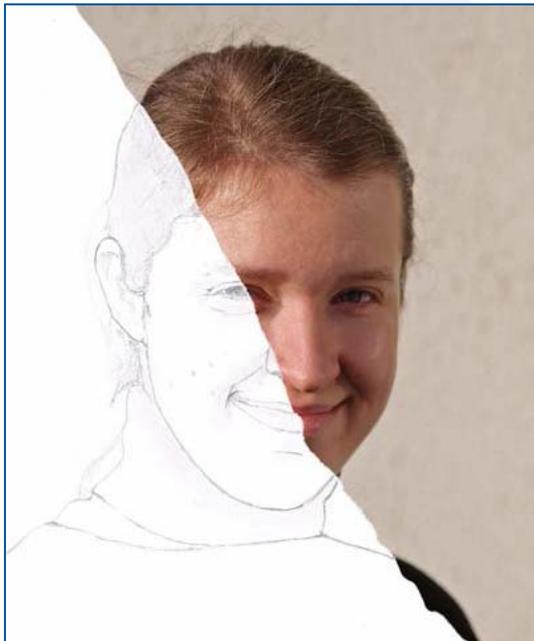


Photo by Andreas Renkewitz



Photo by Udayabhanu Prakash Vaddi

The comic IS a communication instrument already before publication

- Spontaneous idea to show the comic draft on a nature conservationist's forum on the WFD and to the interviewee
- For this: translation to German (tricky: expressions, text lengths)
- Easily possible to collect feedback before publication
- It generates interest and may be a door-opener for talks
- Can be read in short time as a basis for an in-depth talk
- Parts of it may be used for illustrating other presentations
- It is worthwhile to give this format a chance! I have learned a lot!

Nikhil: "Making it bilingual is a decision I supported (even if it required more work from my side), because then the piece is used to directly engage with the stakeholders (like [the] poster at the nature conservation event and even [the interviewee] wanting to show it to others. Would not have worked if it were 'English only'.")

It is always good to have a nice and intelligent artist at the fingertips



Nikhil: “Both of us were on the same 'page', with visualisation skills. Helped a lot to graphically compose each page together. This may not have worked well if [Nadine] were a typical scientist not used to thinking visually :) ”



Thank you!



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Links to the comic will be provided on:
<https://sustainability-governance.net/people/nadine-schroeder/>

