Trapped between barriers OR Flowing despite barriers?
Nadine Schröder & Nikhil Chaudhary
Lunch Talk on a Scientific Comic

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Architect, Urban Planner, Artist
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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
• ... 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.
• 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
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 :)
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