

The article describes Sandbag Replacement Systems (SBRS) in relation to sandbags during emergency management of floods and is interesting to read. It contains research results in terms of costs, helpers and logistics. I recommend a review (major revisions) and a focus on the following aspects:

- The article is very much orientated to the situation in Germany. Existing literature comparing different flood protection systems is not used in a sufficient way. Especially the experience of the emergency management during the recent flood disasters in Europe should be considered. In addition to that, a proper explanation (e. g. figure 1) and a translation of the German terms are necessary.
- It is not quite clear which applications of SBRS and sandbags are considered. In chapter 2, "extreme flood events" are mentioned for the technical assistance of THW. But is SBRS really a tool for "extreme events"?
- The authors compare SBRS with the use of sandbags but do not describe the hydraulics. In my opinion, without a substantial description of the hydraulic situation this is difficult to understand. In Figure 1, "temporary flood protection dams" are visualized. But there is no explanation, if all the four SBRS are equal to each other and what their behavior will be as a response to different hydraulic conditions.
- The overall description of SBRS should take into consideration relevant technical aspects. In chapter 2, some statements are made, e. g. relating "mechanical influences" or "vandalism" without a detailed discussion.
- Chapter 3 mainly focuses on costs. It is somehow confusing to understand the exact definition for example of "helpers". Some other terms are used in the article: "employee", "THW-helper" etc. Is this all the same? Is it used as a synonym? Are the costs always the same, no matter if a helper has a special expertise and training (like the "THW helper")? And is 5 EURO per helper and day (chapter 3.2) really a serious value?
- Some of the mentioned costs (table 1 and 2) need clarification: What does "cost of materials" or "cost of trucks" mean? In the text, it is expressed that there are "comparatively low costs for the use of THW vehicles". But is this for Germany only?! Then it should be clarified that all the statements are based on figures and numbers of the German disaster relief system.
- Table 3: For SBRS systems "2,5 helpers including lower command" are needed? What does that mean?
- The conclusion is not based on the research results. A number of "political statements" are mentioned, e. g. "In particular it is necessary to provide financial support to the municipal authorities responsible for the purchase of the system". No arguments for this statement are mentioned or discussed throughout the article. Overall, I find the conclusion more relevant for stakeholders or municipalities but with little scientific value.
- I recommend to review the English language and strongly emphasise a correct use of technical terms, e. g. emergency or disaster management.