Supplementary to: Efficient Hazard Assessment for Pluvial Floods in Urban Environments: A Benchmarking Case Study for the City of Berlin, Germany

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1 Additional verification metrics

We used additional verification metrics to evaluate the applied methods as follows:

Table 1: Extra Performance indices.

Index	**Equation**	**Range**
Precision (PPV)	$\frac{TP}{TP+FP}$	$0 <$ PPV < 1
Specificity(TNR)	$\frac{TN}{TN+FP}$	$0 <$ TNR < 1
Accuracy (ACC)	$\frac{TP+TN}{TP+TN+FN+FP}$	$0 <$ ACC < 1
Balanced accuracy (BA)	$\frac{TPR+TNR}{2}$	$0 <$ BA < 1

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The Precision (PPV) indicates how valid the results are. The Specificity (TNR) refers to the proportion of the pixels that correctly identified as non inundated among all the non inundated pixels from the true reference. The Accuracy (ACC) refers to the proportions of the correct the pixesl that correctly identified among all pixels from the true reference. The Balanced accuracy (BA) shows how good a binary classifier is, we used it due to the imbalance in the number of inundated and non-inundated pixels. Figure S1 shows the additional performance indices for the FSM and TWI methods for different precipitation scenarios.

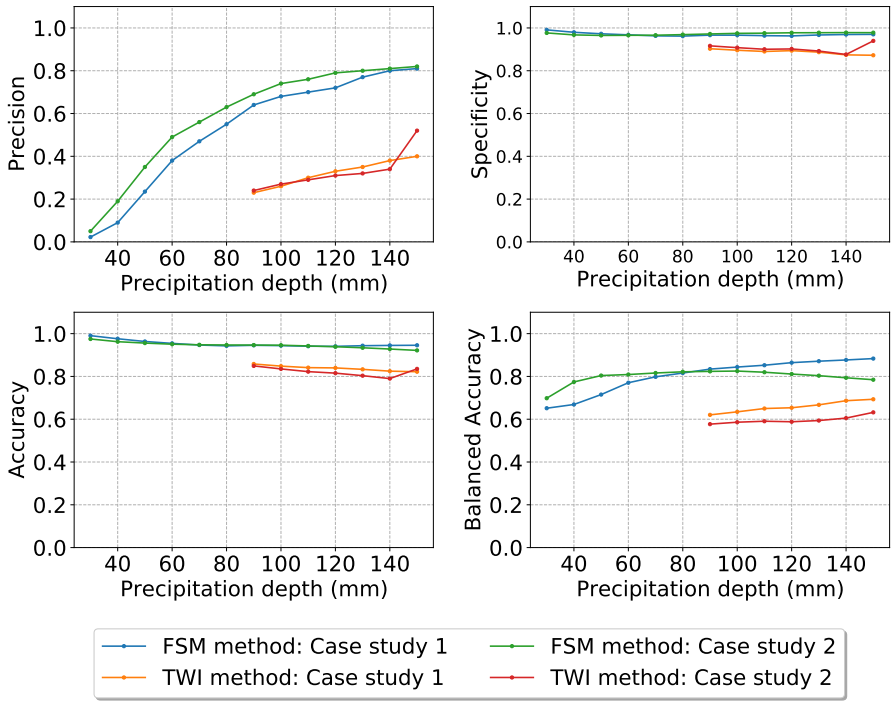

Figure S1: Additional Performance indices for the FSM and TWI methods for different precipitation scenarios.