# Interactive comment on "Reporting flood damages: a model for consistent, complete and multi-purpose scenarios" *by* Scira Menoni et al.

**Anonymous Referee #1**

general comments Very relevant topic that responds to a specific need to unify (flood) damage assessment and draw out the corresponding lessons and insights, improve comparability and reduce duplication. The article would profit from a better explanation who the ultimate audience is - who would be using this model, and how, to achieve the desired outcome of consistency and comparability? A better distinction between what the model actually can do itself and how it rather _complements_ other models/approaches within the space of forensic investigation should be made. I believe this model does not provide a full analysis of root causes - this is done in another part of forensic analysis, not through this model. The clarity of the paper would profit from adding explanations on the application of the model - who, how, when, at what cost. Currently it is felt a bit too abstract and does not mention the time / effort required to pursue this model approach, when it should be best conducted, and the requirements

in terms of (external, official, financial) support needed and data availability to make this work anywhere on the globe. The explanation of the flood scenario as described in 3 could be shortened, conversely e.g. section 3.1. This is not so relevant to the model description. Also, it remains unclear how the consistency would be achieved unless a central database or repository for these model results is created and maintained. Is this model flood specific or could it be adapted to other hazards? This topic is not explored in the paper

specific comments Abstract (line 19): It is discussed that damage mechanisms and root causes are not adequately assessed in the four examples cited before, but it does not become clear how this would be different from a consistent, quantitative flood damage model. It should be more clearly distinguished between (open-ended, non-quantitative) root-cause analysis and consistent damage reporting and modeling. As such I believe iv) discussed in line 25 is not fully feasible through this model. See also line 47 - This model is rather a part of the forensic investigation 'action chain' but not a full forensic investigation per se. Abstract, last paragraph versus discussion of European efforts line 73ff: There is no mentioning of financial priorities to improve loss/damage assessment in the abstract, yet it seems a very important topic in the discussion of European efforts. If 'aim to spend better' is a key outcome, the model should account for that outcome more. One could be more specific about time and spatial scales (line 144ff, lin 149ff) - examples? The clarity of the paper would profit from adding explanations on the application and the limitations of the model. In line 197, a coordinator is mentioned - but not who would own the application of the model and who would run it in event(s). Later on, it is also not mentioned what the requirements are in order to apply the model, and where this could be more practical to apply and where limitations are hindering the application of the model I fail to see how section 3.2 can be used to uncover root-causes of failures. 3.2 highlights hotspots and problem areas, but no explanation as to the 'why' this happens or is so bad.

technical comments Line 16: Should probably be 'consequently', not 'coherently' Line

45: Should be 'analyse', not 'analyses' and 'what has been', not 'what have been' Line 48: Should be 'that', not 'if' Line 63: The sentence could be improved Line 66: Should be 'analyzed' or similar, not 'reported' Line 75: 'Hyogo', not 'Hoygo' Line 96: 'over time', not 'overtime' Line 114f: sentence is unclear to me. Line 131: What is meant by scenarios? Is it not rather the usability of the results? Line 144ff: The 'event' scale is not considered - how do you analyze the event holistically without being hindered by / limited to political or administrational boundaries? Line 171: Property loss? Line 197: A coordinator,..., who (instead of 'which')? Line 211: 'plain' should be 'floodplain'? Line 230: 'RISPOSTA' is introduced here but explained only later. Bring up explanation to this line 230 here. Line 236: 'speaker' should be 'speakers' Line 246: What are 'multi-spots'? Line 249: 'the less' should be 'less' Line 286: Needs rephrasing, unclear to me Line 336: Should be 'widens' Line 341: Reference to risk assesment is unclear - post-event assessment?