Review Comments

https://doi.org/10.5194/nhess-2020-386
Preprint. Discussion started: 26 November 2020

Abstract :

Suggest the abstract need to define direct and indirect , and possibly indicate the degree or estimation error that can be corrected for

Manuscript .

Interesting paper on a relevant topic. It is clearly written but it is challenging to work through and I think it would benefit from some signposting that reminds the reader where (and why) we are up to in the argument.

Some general points

I think more could be made of the actual financial / costs data obtained, and presented to show absolute costs : % changes can be difficulty to interpret : % of what? What do the uplift factors in the table of results actually mean to the baseline cost estimate used in a flood impact assessment or CBA ?

I also think the configurations could be grounded in what is observed : what is the dominant case , and what are the main variations for the industry , perhaps with other configurations showing how estimates vary around a core /central estimate .

I think more explanation about the seasonal variation in the estimates , and importantly , the magnitude of the difference makes to the overall estimate (once seasonality and other issues are taken into account) relative to a 'careful' consideration of impacts on vine production and processing considered separately.

More specific points

Introduction	Agree there is often confusion and an arbitrariness about the definition and classification of costs. Perhaps the paragraph could begin by making this point. The use of the term 'flood damage' doesn't help either ; this implies a focus on damage to physical assets (stocks) and not to flows (incomes and expenditures). It might be better to consider 'flood costs'. It also point to the needs for a cost algorithm function to show what is in and what isn't (see below) Line 42 : so which definition are the authors using here?
	The definitions are not independent of the purpose of the assessment : whether financial or economic, and whether concerned with costs: benefit or economic impact assessment.
54	What kind of values for example: the range in estimates of indirect (as defined here?) and direct can be considerable : 3 % to 30% or more depending on impact sector , and guide on this
54	The use of static ratios or % of direct damage depends on the definition and estimate of direct costs in the first place: and this may vary? % of what? (see below)

65 and para	Likely that ratio of direct and indirect will vary by impact sector /category , eg types of industry/ economic activity, transport, agriculture. As the authors know In the agric case, damage to physical assets is relatively small : the biggest cost component is usually damage to crops- work in progress and evident in income loss and additional operating costs . (insurable asset losses are relatively small as a proportion.) So how are we defining direct ?
45	perhaps should mention how this translates into GVA estimates and multipliers, with various assumptions about additionality/displacement
105	Suggest you say who the paper is aimed at
115	Is this costs to agriculture as a share of total event cost?
125	Perhaps clarify that flood costs here include asset damage as well as income/expenditure impacts (an important aspects of agricultural flooding)
	Perhaps make it clearer that these two impact categories, farm production and off-farm commodity processing would potentially be treated as separate impact categories in flood assessment. This is said later but emphasise more here, I think .
170 onwards	Rather complicated to follow : rest on estimates of damage to assets plus impact on revenues and costs, including work in progress?
	Seems to largely rest on the assumptions regarding the impact on the winery. Estimates of flooding on the wine production areas can be based on ex 'farm gate ' effects . The variation depends then mainly on the effects on the winery :so either the winery incurs 'direct' damage , because it is flooded or it indirect damage because, been though not flood, the quality or quality of supply is affected : so what re the impacts on these two elements in the supply/value chain? I think you are saying the underestimation is where the winery is safe from flooding, but takes a hit from not having grapes. But if it does flood, the impacts are assessed as a loss of contents and process. Hence why there is a big lift in your figures 4 and 4 . You might make this (more) clear
150	Given actual cost data were collected it would be good to include absolute flood event cost estimates , and their make up/distribution between cost components
	A critical point is that that the quantitative results are given as a % of baseline: but what are the bae line costs. The use of coefficients and weights to assess 'indirect' costs depend heavily on what the baseline estimate is > And assume that the baseline here is the sum of the two impact categories considered separately. I note that the estimates are by flood extent, but what are the costs per ha of vine flooded , or per unit capacity of wintery ?
250	Figure 2: what's the top dotted blue line
300 and thereabout	The assumptions and configurations are challenging to follow, How representative are these configurations of what is observed in practice: is the size exposure configuration that gives the highest cost increase common ? or has the industry already adapted to flood risk?
300	It would be useful to produce a cost function that summarises the type of costs , even better it would be good to produce estimates of costs showing the make up of the cost estimates for the different scenarios /configurations. There appears to be 'damage' to asset 'stocks' as well as to income/expenditure flows: what's the proportions of these. Not quite sure what is meant by material damage . Is there an underlying flood evet cost algorithm?

	'Concrete' flood, suggest rephrase
360 and onwards	Would be good to have some cost estimates , as suggested above , and this would help show the scale of the differences in the estimates with an without the connections
420 onwards	The results suggest, as far as I can see, that the main differences (either in costs by configuration or in costs relative to the baseline) are due to autumn and winter flooding. What is the underlying seasonal distribution of flood costs ? More explanation of what to look for in the figures would be good, especially on observed variation (or lack of it)
490	I think some of the points in the conclusions , night better go to reinforce the discussions : perhaps there should be a section on discussion of results and what they mean , in their and particularly, in practice, linked to the point s made in the introductory sections.
495 onwards	It seems as though the cost estimates depend on seasonality as it determines where the grapes are in ex--vine storage and processing system, so the assessment of costs (relative to the baseline) largely depends on damage to stocks and flows of grapes in the system, which is seasonally defined. So I am asking why would not a seasonally based estimate of damage accommodate this for the production (on the farm) and for the vinery, reflecting the dominant configuration . (A coping strategy might also be to important grapes from elsewhere to keep the process going, at a cost))
	I note the points made about overestimate and underestimation of 'indirect' : hence the importance of defining indirect
	Conclusions :e a lot of this is discussion and could beneficially put in a section called that You say the approach is too costly :could estimates be built into the cost algorithm for representative configurations of the industry to allow for these so-called 'indirect' impacts