

Outcomes from the Second Modelling Workshop

26th February 2015 – Southwell

Aim

The aims of the second workshop were to:

1. Create a stock and flow diagram based on the flows of risk identified in workshop one
2. Identify and describe the causal relationships existing between variables in terms of their polarity

The purpose of these notes is to provide an overview of the second modelling workshop, present the outcomes for those stakeholders involved and to allow for any stakeholders that missed the workshop to keep informed of the process.

Opening presentations

The workshop opened with a presentation of the aims and objectives for the second workshop, including changes to the original agenda following progress in workshop one. Key terms were defined as follows:

Risk was presented as a combination of likelihood, exposure and vulnerability (of which the latter two are usually conflated into the term ‘consequences’). This was presented in combination with the source – pathway – receptor model, suggesting that reducing the likelihood of flooding is associated with disrupting the source or pathway (as traditional flood defences do), whilst reducing exposure and vulnerability is achieved by intervening with the receptors (i.e. the people and places at risk).

Polarity was presented by the diagram below:



An increase in A causes an increase in B



An increase in X causes a decrease in Y

An example of a stock and flow diagram was then presented to give participants an idea of what the diagram looks like, and what different components are brought together to make it. These components were described, and examples from our own model were given. The presentation concluded with a worked example of the modelling activity.

The presentation is available to view online at

http://prezi.com/ir0nuklwnvv6/?utm_campaign=share&utm_medium=copy&rc=ex0share

Modelling activities

Participants were organised into two groups, with expertise split between the north and south sections of Southwell. The ‘northern’ group worked on the risks at Merryweather, Crafts Way/Archers Field and the Ropewalk. Further input/expertise is required to assess risks at The Sump. The ‘southern’ group worked on the risks to Halloughton Road, Nottingham Road, Church Street and Potwell Close.

Each group was presented with an A1 print-out of the flow diagram produced in workshop one (see attachments with this e-mail). The flow diagram consisted of a number of stocks (locations at which risk accumulates and falls over time), and 'pipes' showing where risk can flow between these locations. These pipes each has a rate, which works in a similar way to a tap, controlling the rate at which risk flows along that pipe.

Using laminated variable cards (developed from the diagrams completed in workshop one), participants built up a network of cause > effect around the risk locations in the flow diagram. New variables were created where needed, and some cards were not used. These variables were linked by arrows showing the cause > effect relationships and, where time allowed, their polarity was added.

Workshop outputs

The outputs from workshop two include the cause > effect network created during the modelling activities. This is by no means an end product, and will need to be developed further before we can start defining the relationships between variables. Some areas in particular, need further expertise from participants that could not make the second workshop, and this may be sought during March, and prior to the third workshop.

The outputs attached with this summary include:

1. 'First attempt' stock and flow diagram

Please note that I have tried to recreate the diagram as it was drawn in the workshop (i.e. I have not added nor removed any variables or arrows). Although the groups worked on different areas of town, merging the two diagrams lead to some duplication. Where this was the case, this has been removed.

Next steps

In the next workshop we will start to define the relationships between variables, initially by looking at how risk changed at each hotspot during the 2013 event.

Thank you to those that attended the second workshop, with special thanks to our hosts Jill Labadz and Vic Hird of Nottingham Trent University.

The third workshop will take place on **Wednesday 25th March in Southwell. Venue to be confirmed.** The workshop will run from **7:00pm – 9:00pm.**

If you have any questions before the third modelling workshop, please get in touch.



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