

Flooding dialogue: 22nd September 2014

<i>The issue</i>	<i>The science, etc</i>	<i>The implications</i>
Big floods; small floods; big areas; small areas	Plot scale impacts of 'natural' interventions are not replicated in large catchments. Small floods can be influenced by land management and similar measures, but in big floods the catchments are generally saturated and land cover has negligible effect.	What <u>seems</u> to work does not have general applicability

Conclusion: 'Natural' flood defences may be useful, but are hardly a panacea (or anywhere near sufficient)
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Antecedent conditions	The antecedent conditions appear to dominate as drivers of flood risk and losses.(e.g. 1947; 2007).	These largely cannot be influence by 'natural' FRM interventions

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The heritage	Most major rivers in the UK have considerable FRM interventions, so only the bigger events come out of bank (e.g. the Thames is out of bank only at the c. 10-15 year return period).	The interventions that may attenuate small floods mean that these do not cause much damage anyway.

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Coastal flood risk	This is important, and the forces involved are orders of magnitude greater than fluvial flood situations (e.g. East Coast 1953; Towyn)	Very little 'natural interventions' can cope with flooding from the sea (big beaches are often far from natural)

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Urban/flash flooding	Rapid runoff here - over paved surfaces - appears to becoming more common (Camden Town; Boscastle)	Retro-fitting 'natural defences' (even as SUDS) is unlikely to affect anything but the more minor events.

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Urban/flash flooding	Rapid runoff here - over paved surfaces - appears to be becoming more common (Camden Town; Boscastle)	Retro-fitting 'natural defences' (even as SUDS) is unlikely to affect anything but the more minor events.
Cost (and gain)	High dispersed 'natural defences' will require interventions (not just neglect) and management, and this is likely to be very expensive.	There are large economies of scale in FRM interventions.

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Antecedent conditions	The antecedent conditions appear to dominate as drivers of flood risk and losses (e.g. 1947)	Antecedent conditions and interventions
The heritage	Most major rivers in the UK have been subject to interventions that may have altered the natural flow regime and the forces involved at the catchment scale.	Interventions that may attenuate small floods mean that these do not cause much damage anyway.
Coastal flooding	Coastal flooding and the forces involved are orders of magnitude greater than fluvial flood situations (e.g. East Coast 1953; Towyn)	Very little 'natural interventions' can cope with flooding from the sea (big beaches are often far from natural)
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