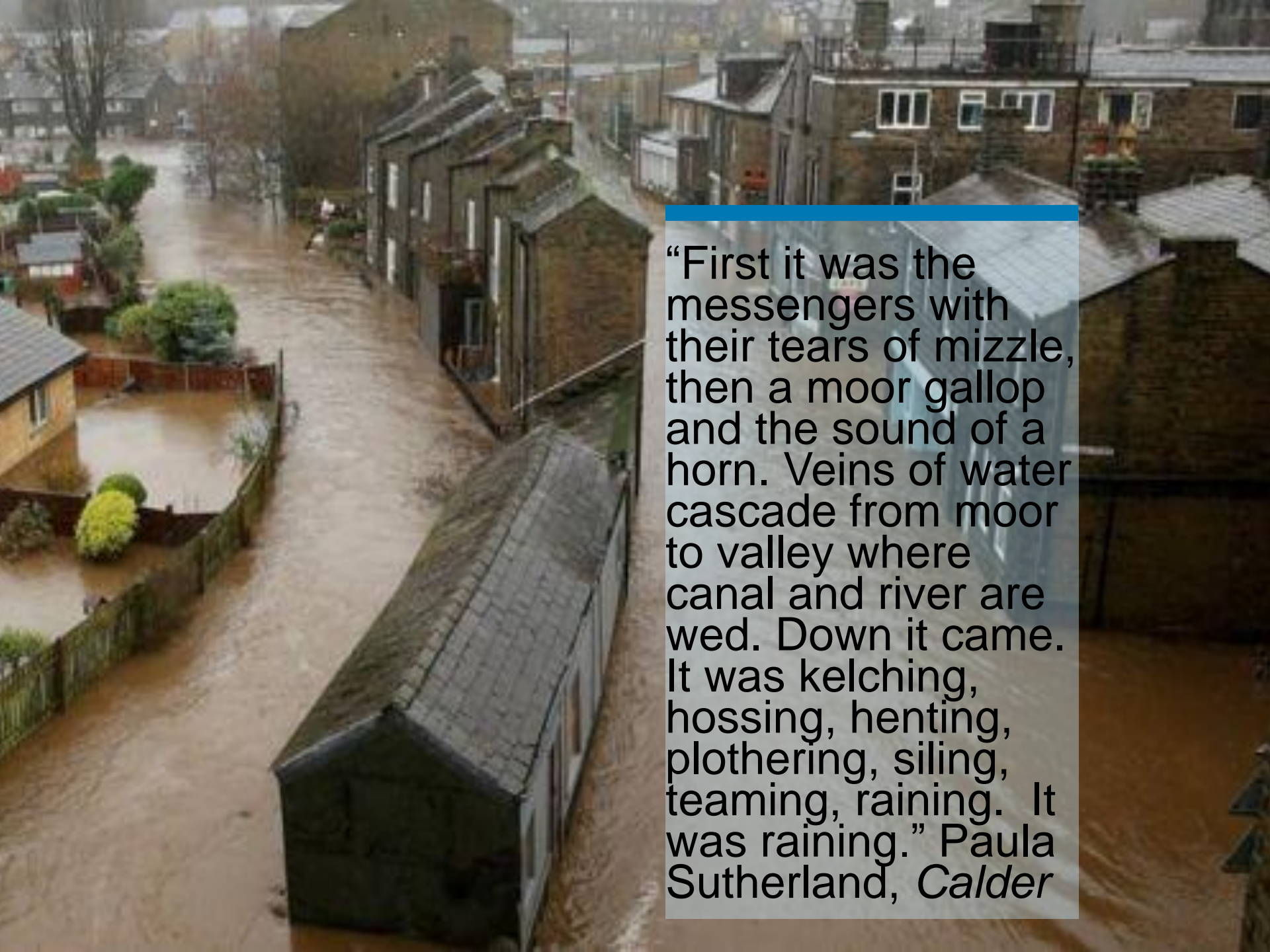


# Surveying the views on Natural Flood Management: implications for flood risk management

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“First it was the messengers with their tears of mizzle, then a moor gallop and the sound of a horn. Veins of water cascade from moor to valley where canal and river are wed. Down it came. It was kelching, hossing, henting, plothering, siling, teaming, raining. It was raining.” Paula Sutherland, *Calder*





# Natural flood management



# Survey

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- **When?** Spring 2017
- **How many?** 118 respondents
- **Who?** Diverse respondents working in the public sector, agency, local & national government (42%), private sector (25%), third sector (14%), farmers (8%), academics (11%)
- **Expand NFM?** 76% believed NFM should be implemented more widely in the UK
- **Actions needed?** 85% that changes such as more research & evidence is needed

# Barriers to NFM

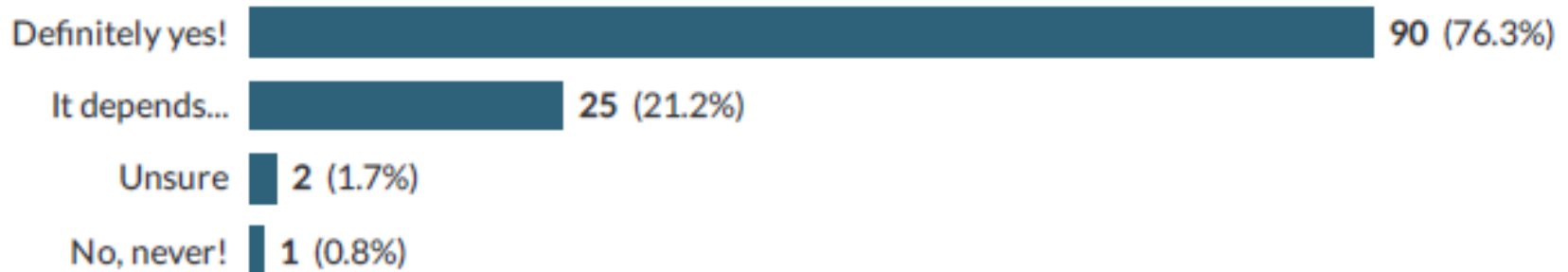
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- **Coordination:** All respondents believe NFM needs to be coordinated at the catchment scale
- **Tenure:** Almost all respondents believe that there will be additional challenges installing NFM in areas with tenant farmers & multiple landowners
- **Evidence:** Respondents' beliefs were mixed about the sufficiency of current evidence on the effectiveness of NFM. This was particularly with respect to the effectiveness of NFM schemes during high flows & its cost-effectiveness
- **Risks:** Respondents' beliefs were mixed about the unintended consequences of NFM, maintenance requirements & its impacts on the visual landscape



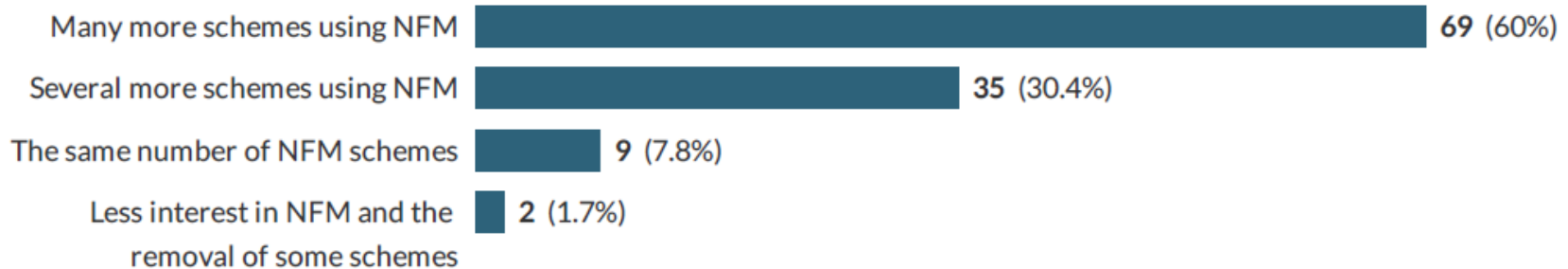
# Should NFM be implemented more widely?

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- Significant differences at the 10% level between the response and the **occupation** of the respondent.
  - **Farmers** were much more likely to respond “*It depends...*” than the other occupation groups
- Significant differences at the 10% level between respondents with / without **flood experience**
  - Those with direct flood experience more likely to answer “*It depends...*” than expected.

# Thinking 10 years ahead, what do you see?



- Significant differences at the 5% level between the response and the **occupation** of the respondent
  - Third sector respondents were more likely to respond “*Many more schemes*”, Academics were much more likely to respond “*Several more schemes*”, and Farmers were much more likely to respond “*The same number of NFM schemes*” than expected.
- Significant differences at the 10% level between the response and the **flood experience** of the respondent.
  - Respondents with in/direct flood experience were more likely to answer “*The same number of schemes*” than those without in/direct flood experience than expected

# Responsibilities: enabling vs implementing

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Group	Enabling		Implementing
<b>Statutory agencies</b>	<b>114</b>		<b>70</b>
National government	113		31
Local Authorities	111		90
Catchment partnerships	110		77
Academics	109		22
Water companies	98		90
Conservation groups	93		98
Estate managers	91		97
Insurance companies	90		15
At risk communities	77		82
<b>Farmers</b>	<b>64</b>		<b>111</b>
Unsure	2		1
Other	7		4

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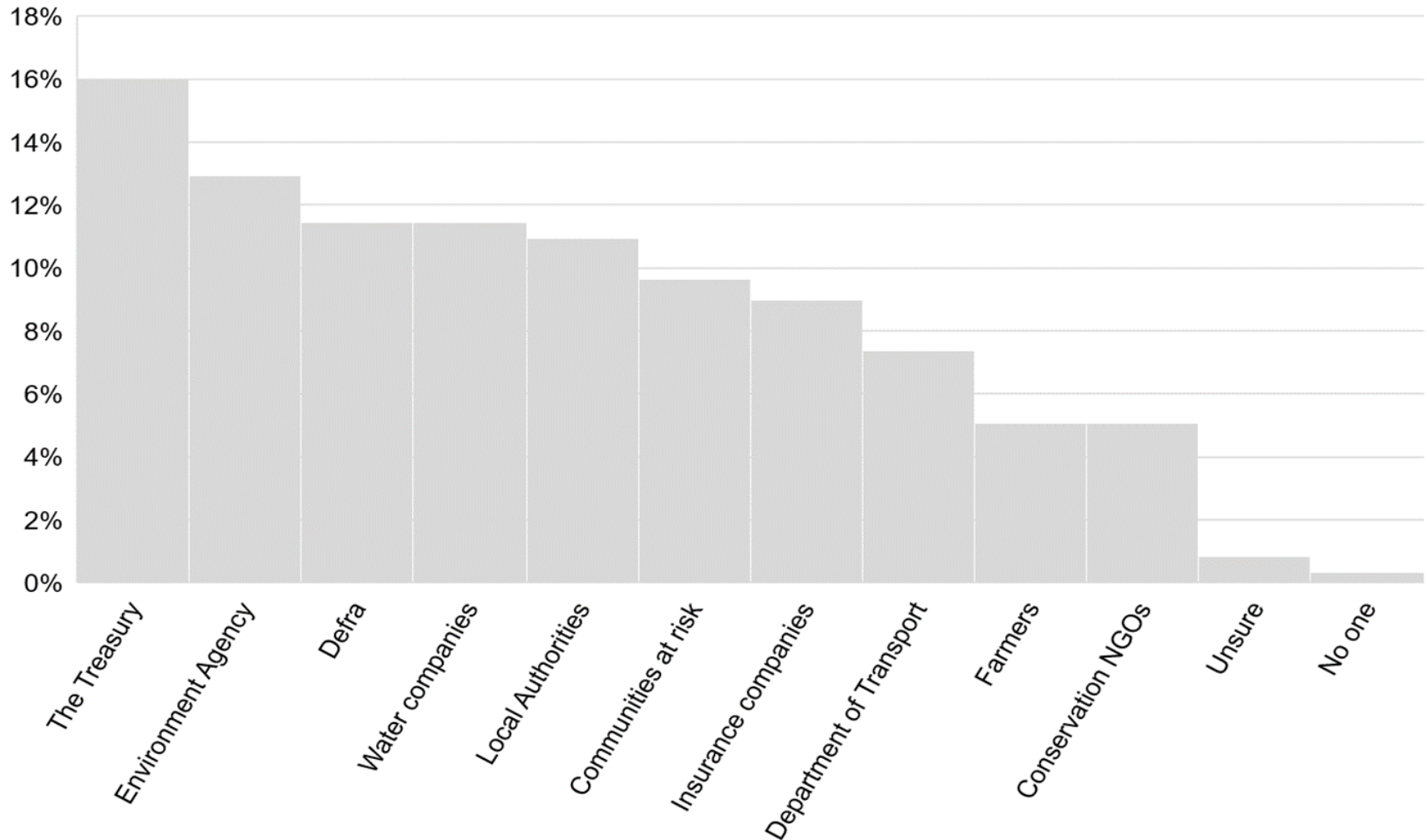
# Responsibilities: enabling vs implementing

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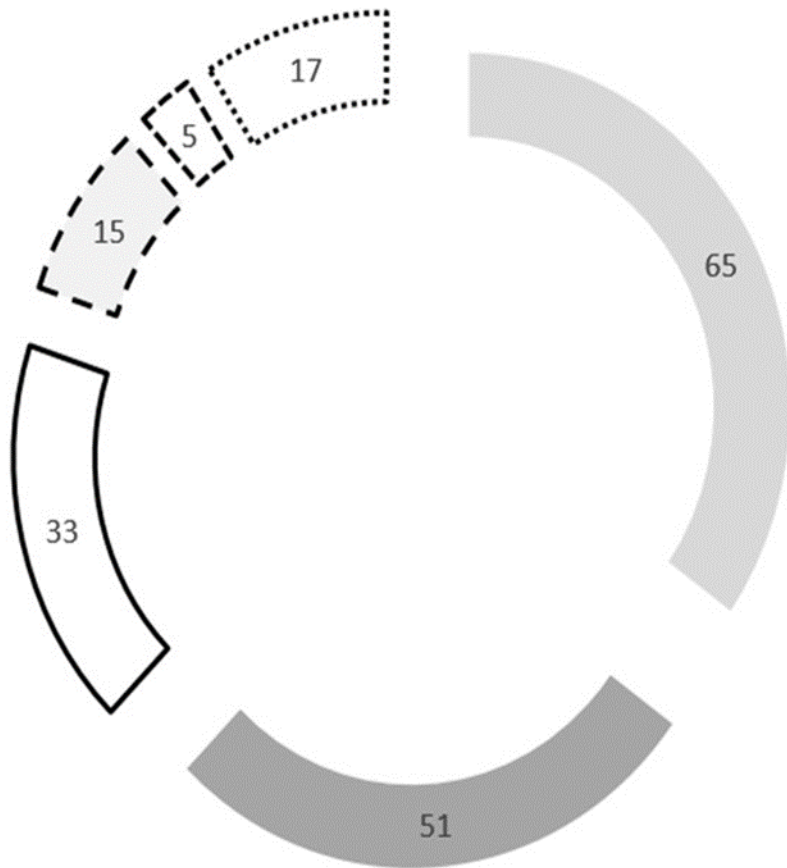
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# Paying for NFM: A shared responsibility



# Calculating NFM payments

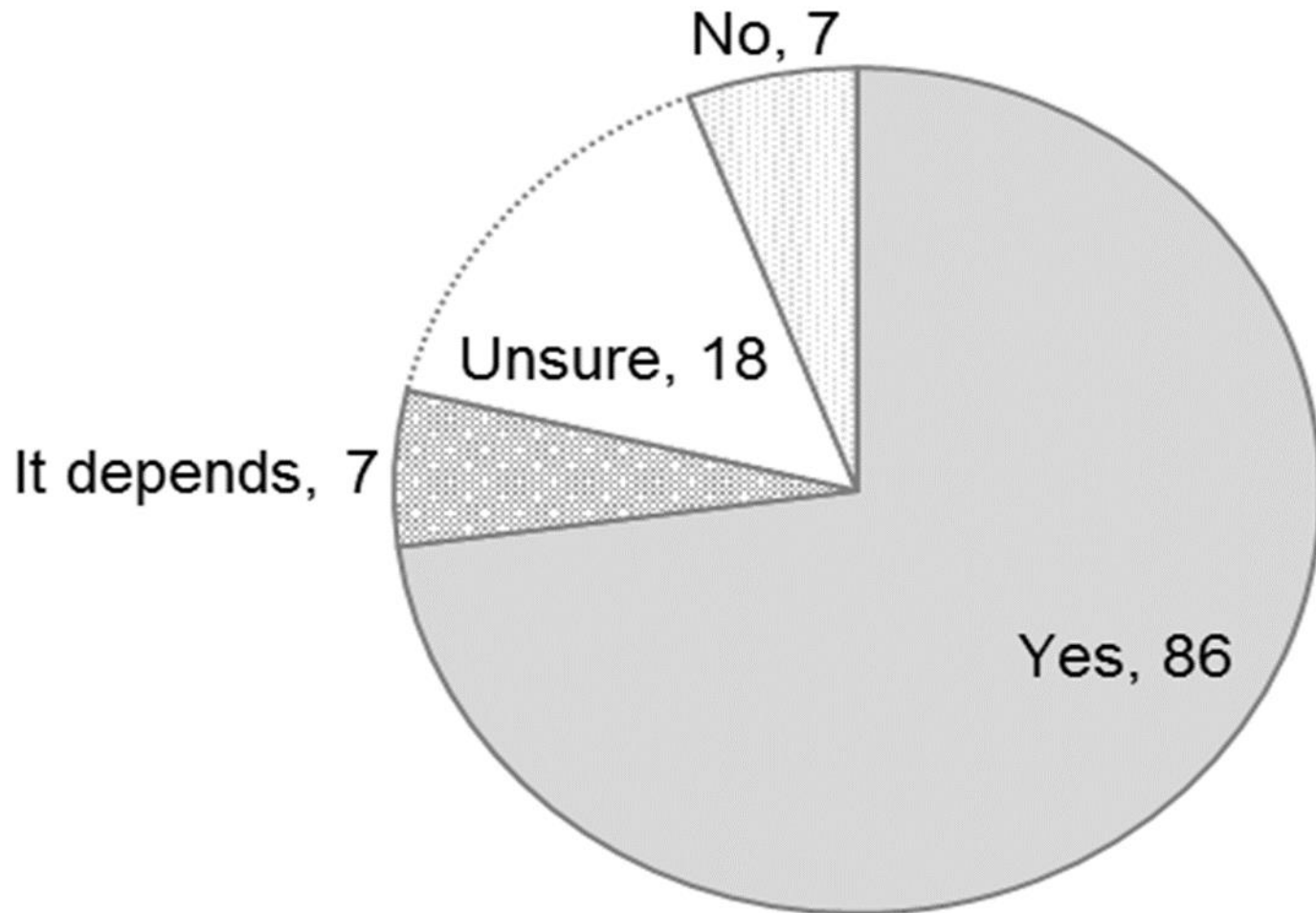
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- Based on installation costs plus maintenance costs (e.g. NFM payment = installation cost + maintenance cost)
- Based on lost income, i.e. if farm land is temporarily flooded (e.g. NFM payment = value of lost production + land productivity recovery costs)
- Based on modelled effectiveness of NFM measure(s) and avoided costs of flooding (e.g. NFM payment = value of avoided damages)
- ▣ Sustainable management of catchments and land should not be conditional on payments
- ▣ There are higher priority policies than NFM
- ⊞ Unsure

# Paying for co-benefits

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# Paying for co-benefits?

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- ? Carbon sequestration\*, soil\*, biodiversity\*, water quality, recreation\*, wildlife habitat\*, public\*, archaeology, improvements for local community, visual amenity
- ✓ Wins supporters, it is what is attractive about NFM
- ✓ Important for efficiency and without multiple benefits many schemes might not be viable\*
- ✓ Like Countryside Stewardship, NFM should pay for biodiversity/recreation\*
- ✓ Internalise externalities
- ✓ But also need to account for NFM costs\*
- ✓ NFM that provides public services receive higher payments\*
- ✓ Would encourage better NFM project design
- ✓ But recognise NFM benefits society more than flood risk
- X Incidental to flood risk benefit
- X NFM will only work in a few specific cases. What is meant by benefits?
- X How do farmers monetise these benefits, e.g. bird watching?
- X Need more information as complex question
- X If 'yes' then farmers could also decide to provision no ES

# Key results

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- Farmers attitudes are different than other groups and they are expected to play a key role in NFM
- Ideas around subsidiarity
- Ideas around shared responsibility
- Need for catchment scale demonstration projects

Future implementation of NFM may require the support or involvement of groups that currently do not yet play a big role in flood risk management or in NFM

Involvement of these groups maybe motivated by the co-benefits they might receive

# Thanks

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