




# Topic 4

## Increasing Risks of River Flooding

Learning Objectives	Grade
<b>To <u>describe</u> the risks from river flooding</b>	
<b>To <u>explain</u> the threats from flooding to people and the environment.</b>	
<b>To <u>apply</u> this knowledge to and exam question.</b>	

Literacy Focus = use of connectives e.g. 'because', 'therefore'

# Increasing Risks of River Flooding

## **Bullet point the causes of increasing risk from river flooding:**



Climate Change



Urbanisation



Extreme Weather



Development on flood plains

*During the video*

**Bullet point information from the video below**



## The risk of flooding is increasing in the UK...

1. Copy the table below into your books/google docs.
2. Sort the statements (on the next slide) into the correct part of your table, to describe the reasons (increased storm frequency & land use change) why there is an increasing risk of flooding from rivers in the UK

Increased storm frequency	Land use change

3. Explain in detail how increased storm frequency & land use change is increasing the risk of river flooding in the UK (6)

### Criteria:

- Use a variety of key words
- Use facts and statistics
- Use connectives to extend your answers  
e.g. 'because', 'therefore'
- Include examples



### CHALLENGE

Answer the exam question below:  
Explain two ways in which climate influences sediment load.

**Extension: Explain what is meant by the term 'antecedent conditions'.**

The frequency of storms in the UK is increasing - this could be because of climate change.

As the UK population grows, there's more pressure to expand urban areas. This leads to an increase in impermeable areas, causing rapid surface runoff.

Lots of development e.g. house building, is taking place on flood plains. These areas are naturally prone to flooding and this increases the risk of flooding to developed areas.

Storms are becoming more extreme - more intense rainfall is increasing the scale of flood events.

More people living on flood plains mean that there are more people at risk of flooding if flood defences fail.

Removing vegetation and permeable surfaces means that water would have been stored in the soil or plants and trees now flows quickly downstream.

More periods of wet weather mean that the ground is saturated, making flooding more likely.

**Explain in detail how increased storm frequency & land use change is increasing the risk of river flooding in the UK**



## Flooding threatens people and the environment....

1. Read the information below and create a spider diagram, with diagrams, to explain how flooding can threaten people and the environments.
2. On your spider diagram, rank each threat (10 in total) in order of significance.

- 1) People can be killed or injured by floodwater.
- 2) Roads, bridges and rail lines can be damaged or destroyed.
- 3) Floodwater is often contaminated with sewage, which can lead to a lack of clean drinking water.
- 4) Possessions can be damaged or washed away.
- 5) People can be made homeless as their properties are inundated or damaged.
- 6) Businesses may be forced to shut down because of flood damage and disrupted power supplies. This leads to a loss of livelihoods.



Flooding threatens people and the environment

- 1) Floodwater contaminated with sewage and rubbish can pollute rivers, damaging wildlife habitats.
- 2) Farmland can be ruined by silt and sediment deposited after a flood.
- 3) River banks are eroded, causing huge changes to the river landscape, e.g. widening of the river channel and increased deposition downstream.
- 4) The force of floodwater can uproot trees and plants, and standing floodwater may cause those that survive the initial wave of water to die.

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## Challenge

1. Explain in detail how increased storm frequency & land use change is increasing the risk of river flooding in the UK

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1. **Explain in detail how increased storm frequency & land use change is increasing the risk of river flooding in the UK (6)**
  - **Example point** - More periods of wet weather mean that the ground gets saturated increasing the risk of flooding, as the ground cannot hold anymore water so it runs as surface runoff to the river faster. For example the river eden flood in 2005 was exacerbated by the fact the climate there is very wet and mild meaning the ground was already saturated.
  - **X2 more points for 6 marks.**



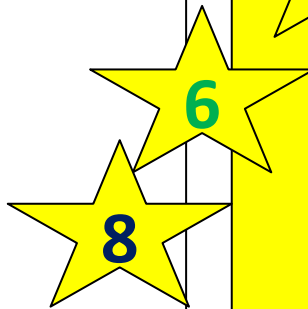
## Exam Question:

**Assess the extent to which increasing flood risk from rivers in the UK is threatening people and the environment. (8)**

- 4 Double developed points - use connectives
- Structure! - Intro and conclusion!
- Use specific geographic knowledge (HINT: knowledge from this lesson) - River Eden

### Criteria:

- **Own words**
- **Accurately explain statements**
- **Include statistics**



### Challenge



*Answer the following exam style question:*

Explain the 3 types of mass movement

**Extension: Explain why climate change might increase river load over time.**