

Video summary	Before watching the video	During the video
<p><b>Paul Whitehouse looks at how agricultural pollution is affecting the River Wye.</b>                      The River Ithon (Afon Leithon) rises in the Welsh uplands and flows from its source north of the Welsh village of Llanbadarn Fynydd, to its confluence with the River Wye just south of Newbridge-on-Wye.                      The River Wye flows from its source in the mountains of mid Wales for some 155 miles (250 kilometres) to the Severn estuary, marking the border between England and Wales for much of its length.                      In the recent past, these rivers supported diverse and thriving wildlife populations but studies show that both rivers are heavily polluted, with little life to be seen. Many of the upper stretches of the River Wye and its tributary the River Ithon, are affected by problems linked to intensive farming.                      The Wye catchment area supports intensive chicken farms, with a population of about 20 million chickens at any one time, and this activity produces a lot of chicken manure.                      Farmers spread the manure on their land as fertiliser as it is rich in nutrients and phosphates. However, if washed into nearby rivers, it encourages rapid algae growth and this, in turn, kills off other wildlife, rendering rivers lifeless.</p>	<ul style="list-style-type: none"> <li>• Ask students who eats chicken and how many times a week. Can they guess how many chickens go to slaughter on average in the UK each week? According to government statistics, that figure is between 20 and 21 million. So, what do they know about the production of this popular food? Take ideas and explore the term ‘intensive agriculture’.</li> <li>• Ask students if anyone has heard of or visited the River Wye. It is a well-known British river and the Wye Valley, through which the river flows for about a third of its length, is an Area of Outstanding Natural Beauty (AONB) and popular with activity and wildlife enthusiasts. Find it on a map and discuss the landscapes it passes through.</li> <li>• Ask students what they know about the state of the River Wye today and the threats it faces. Explain that sections of the river are nearly lifeless and ask students to watch the film carefully so they can explain why.</li> </ul>	<ul style="list-style-type: none"> <li>• You may wish to stop at relevant points during this short film to pose questions and check understanding or wait until the end. Useful questions might include:</li> <li>• Why has there been a large increase in the chicken industry? (To satisfy our need for cheap food).</li> <li>• Why and how are the rivers being polluted?</li> <li>• How can you tell if a riverbed is dead without testing? (silting, lack of water weeds, may be green with algae growth).</li> <li>• What is a buffer zone?</li> <li>• How many chickens are on this one farm at any one time? (about 120,000)</li> <li>• How many chickens are ‘processed’ on this one farm throughout the year? (nearly a million)</li> </ul>
<p><b>After watching</b></p>		

- Students could draw an annotated diagram to show some of the causes and impacts of river pollution from agricultural practice.
- The farmer explained that buffer zones are designed to keep the pollution to a minimum but what is going wrong if the rivers are still being polluted?
- Ask students to suggest some reasons why and create a list. For example:
- Does the buffer zone need to be bigger? Does the number of chickens farmed need to be smaller?
- If the buffer zone is not being adhered to, does enforcement need to be more stringent?
- Are we eating too many chickens? Are chickens too cheap?
- Is chicken farming too concentrated in one region?
- Discuss this issue and challenge students to come up with some suggestions for a workable solution and create a written report with appropriate maps and diagrams.
- What are the pros and cons then of intensive farming? Ask pupils to think about this using the evidence from the film and watching the Bitesize for Teachers video [Geography KS3/4: Intensive farming](#).

Curriculum notes	Where next?	Links
<p>All these short clips build on students' understanding of human and environmental interactions and provide opportunities to practice geographical skills such as enquiry, mapping and fieldwork. At KS3, students can learn more about how human and physical processes interact to influence, and change landscapes, environments and the climate. At KS4, the film supports understanding about fluvial environments, flooding hazards and climate change, environmental management and fieldwork investigation. This video develops understanding of economic activity and natural resources (KS3), and supports students in researching and debating ethical issues in geography (KS4).</p>	<ul style="list-style-type: none"> <li>• Can students think about other perspectives too such as the impacts on the health of a local economy where jobs may be scarce (economic); impacts on flora and fauna (environmental); and on recreational opportunities and healthy places to live and work (social).</li> <li>• Remind students that this is just one pollution source. Other sources include human sewage and chemicals.</li> </ul>	<p> <a href="#">KS3: Rivers and Water</a>  <a href="#">GCSE: River landscapes in the UK</a>  <a href="#">GCSE: River environments</a>  <a href="#">GCSE: Rivers</a>  <a href="#">GCSE: Managing the impacts of climate change</a>  <a href="#">GCSE Geography - exam practice</a>  <a href="#">National 4: Rivers</a>  <a href="#">National 5: Rivers and valleys</a>  <a href="#">Bitesize Careers: Jobs that use Geography</a> </p>