

# The Voluntary Farmer Led Approach to Nutrient Management

## Water quality in your County



Monmouthshire comprises of two major river catchments, the Usk and the Wye. These are made up of a rich and varied landscape spanning the Welsh and English borders.

Land is predominantly used for agriculture, with the uplands focusing on beef and sheep farming. The richer soil types of the lowlands support a variety of arable, soft fruit, dairy, beef and poultry.

The catchments provide water supplies to Dwr Cymru and local agriculture with large quantities of water being taken for public water supply and irrigation in agriculture.

### Monmouthshire & Torfaen WFD Surface Waterbodies 2018 Overall Status & Priority Work Areas

#### Gavenny Catchment

Nutrient and sediment issues. Urban pollution being targeted in Abergavenny by Natural Resources Wales & Dwr Cymru Welsh Water. And recent work in the rural areas by Wye & Usk foundation.

#### Trothy Catchment

Nutrient and sediment issues being targeted by Natural Resources Wales, Dairy Farm project, Farming Connect

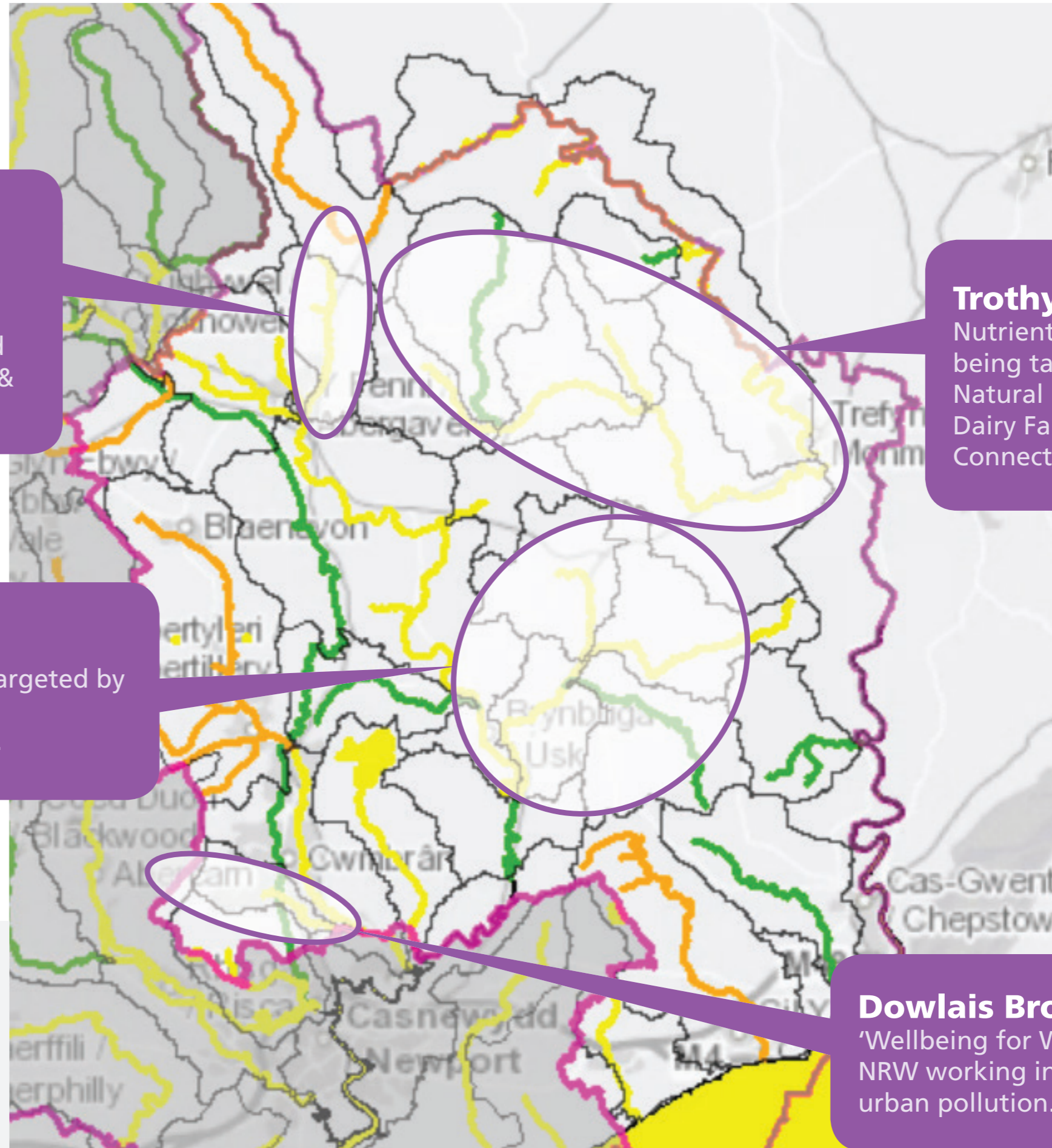
#### Olway Catchment

Nutrient and sediment issues being targeted by Natural Resources Wales Officers, Dairy Farm project, Farming Connect.

#### Dowlais Brook

'Wellbeing for Watercourses' project. NRW working in partnership to tackle urban pollution.

**Note:** The Lower main River Wye is not shown because it is reported by the Environment Agency. When last classified it was Moderate status



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## Risks

Pollution sources within the catchment have been identified as nutrient and sediment losses from agricultural practices and pollution from sewage and contaminated run-off in urban areas. These nutrient contributions have had an impact on water quality within the catchments driving the need for the work identified on the map.

Soil erosion has both a short and long term impact on water quality. Nutrients carried into watercourses increase plant growth and decrease oxygen reducing habitat value. Longer term impacts are the change in water quality and build up of particles on gravels. This reduces spawning grounds for fish and habitat for invertebrates within the watercourses.

Across the UK it is estimated that 2.9 million tonnes of soil is eroded each year.



Slurry is highly polluting if it ends up in the wrong place like watercourses. Excessive nutrients to land or a leaking slurry store can cause serious pollution.

These nutrient losses into water courses have an environmental and economic impact to your farm business. Excess nutrient loads in your soils or applying in the wrong conditions such as on frozen or waterlogged soil can lead to leaching into surrounding ditches, streams and rivers. This can cause serious pollution and impact on aquatic life.

Diffuse pollution can come from a number of sources, including poaching alongside rivers and streams or flow paths to a water course. The effects of small sources of erosion and/or poaching is cumulative in a catchment. What appears to be small amounts of runoff from one field, when added to all the other sources that also feed into that stream or river can have a big overall effect on water quality within a catchment.



**FACT**  
It can take up to **500 years** to replace 1 inch of topsoil.

Measuring the cumulative effects of managing nutrients on farm and changing behaviours within the industry demonstrates the value water quality has to our sector. This allows agriculture to bench mark its performance against other potential polluters and capture the multiple benefits good farming practices deliver, on farm, and within our water courses.

# The voluntary farmer led approach initiative



## What is The voluntary farmer led approach to nutrient management project?

The Farmer Led approach is a forward-looking, industrywide project led by NFU Cymru, in collaboration with NRW, FUW, DCWW and WAG.

It is looking to create a pan-Wales nutrient management approach that is accessible to all farmers in all farming sectors. The project is developing options to deliver;

- Water quality improvements
- Reducing N, P, and soil losses to water courses

## What does it want to deliver?

Wales' waters provide social, environmental and economic benefits to our landscape, communities, and culture. In line with the Welsh Government and Natural Resources Wales Sustainable Management of Natural Resources approach the project looks to support farmers in protecting this valuable commodity by delivering:

- Maximising natural resources on farms across Wales
- Fewer agricultural pollution incidents and less diffuse pollution
- Better soil, water and habitat quality
- Improve nutrient efficiencies within agriculture
- Developing methods to combat climate change
- Developing market advantages by demonstrating produce quality

To deliver these benefits the project is developing an assurance structure, led by farmers.

## Benefits

- Whole industry engagement into the design and delivery of the project
- Raised awareness of the benefits of nutrient management & water quality
- Improved surface water, groundwater and soil quality across Wales
- Improved farm business resilience through resource efficiencies
- Water quality guidelines provide marketing opportunities for public goods and services
- Improved data collection and evidence on impacts affecting water quality / quantity
- Create a nationwide programme to reduce the risks of nutrients impacting water courses and ground water supplies

“ While there are a range of factors and sectors affecting water quality in Wales, all of us working in agriculture know we must work together to make improvements in the areas under our control. Having been a part of this project since its inception, I strongly believe that there is a genuine commitment from all partners across the two key project stakeholder groups to explore all options and drive improvements that will make tangible, long-lasting changes across our industry. ”

Aled Jones  
NFU Cymru Deputy President

# The Voluntary Farmer Led Approach to Nutrient Management Opportunities



## Why focus on nutrients



By working with nutrient management on your farm multiple benefits can be delivered to your business and the environment. Understanding the soil and nutrient needs of your farm enables you to match nutrient inputs (fertilisers and organic manures) to crop demand. This

- increases flexibility and resilience for your business
- allows you to spread slurry and manure at the best times
- have peace of mind that your farm is not at risk of polluting your land and the wider environment.

including soil supply and organic manures (livestock manures, sewage sludge, digestate, compost, industrial waste)

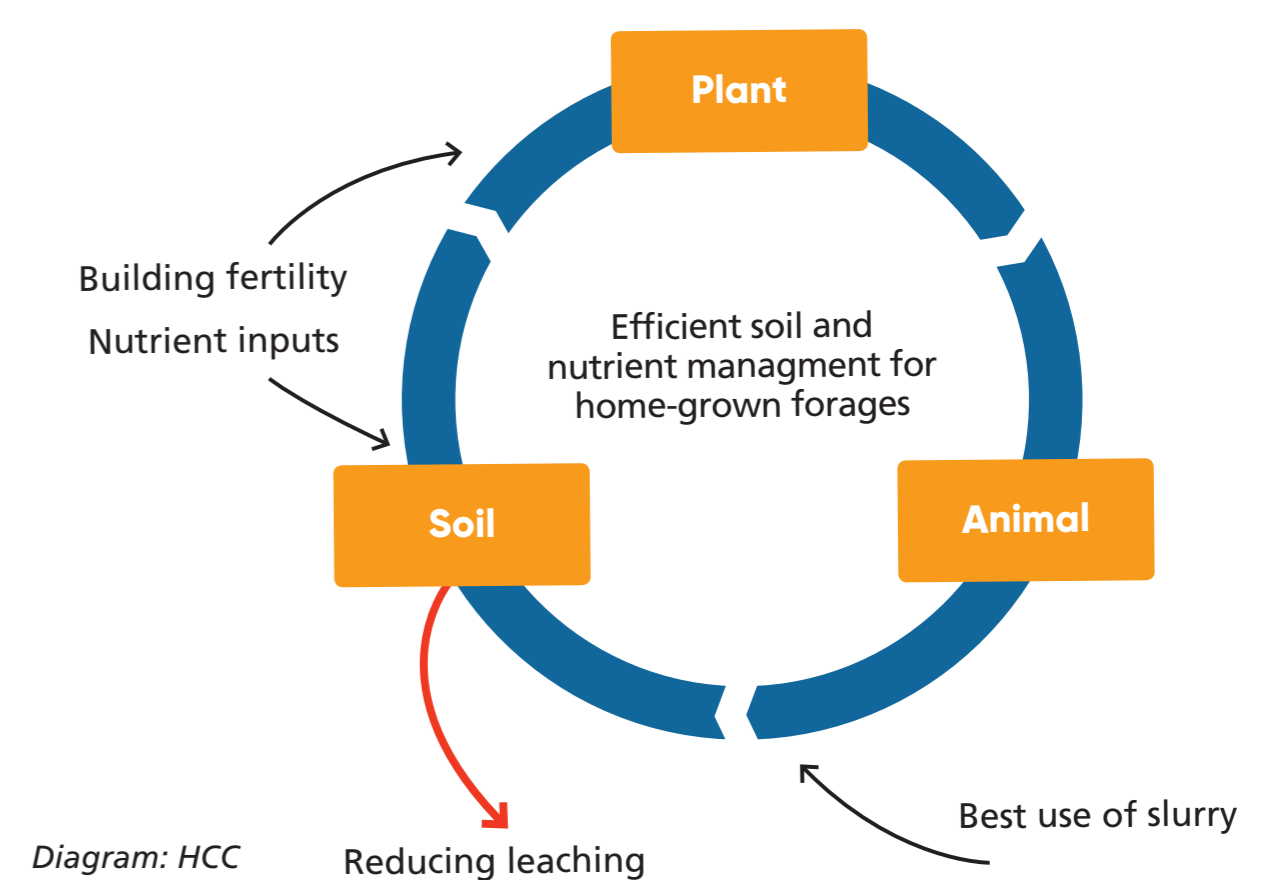
## Benefits

- Reduced environmental risks due to field losses of excess nutrients
- Best value from fertilisers and organic manures used
- Enhanced crop yield and quality
- Potential cost savings when all nutrient inputs are accounted for
- Improved crop and livestock performance from a balanced supply of nutrients

Maximising environment within your farm can deliver multiple benefits, such as;

- Fencing off wet areas to create habitat corridors provides buffer strips and erosion control for streams and river banks improves water quality
- Field margins provide sediment traps for surface water runoff, reducing the risk of nutrients and soil particles entering water courses
- Hard standing provides all year round access outdoors and manages poaching around troughs and feeders
- Bridging over ditches and rivers reduces the risk of poaching and pollution risks keeping rivers healthier
- Tree planting and hedgerows can reduce overland flow, increase infiltration and provide shelter for wildlife and livestock

## Farming the nitrogen circle



Only 30% of the soils in Wales are thought to be where they should be in terms of pH. Knowing your soils enables you to manage nutrients more effectively by considering;

- Undertaking soil sampling to identify; soil type, PH, N P, K and organic matter content
- Looking for signs of soil compaction, this affects production, reduces infiltration and increases the risk of runoff of manure and fertiliser
- Developing a nutrient management plan to properly administer the nutrients that are generated on-farm, manage the risk of pollution incidents and reduce the need for purchasing fertiliser and feed by maximising productivity
- Engaging with others through discussion groups and advisory services to support you in developing and understanding the potential savings this could deliver.

Reduce risks of soil erosion by;

- Identify 'at risk' areas for surface water runoff and avoid exposing soil in those areas
- Undersow vulnerable crops such as maize to reduce risk of erosion
- Avoid ploughing steep slopes and /or right up to ditches and watercourses
- Exclude stock from streams and river banks to reduce the risk of poaching and river erosion of exposed soil

