

TYPES OF NATURAL FLOOD MANAGEMENT

Natural flood management (NFM) involves working with nature to reduce the risk of flooding for communities. It uses various techniques to restore or mimic the natural functions of rivers, floodplains and the wider catchment. It aims to store water in the catchment and slow the rate at which water runs into rivers, to help reduce flooding downstream.

RIVER & FLOODPLAIN RESORATION



This involves restoring river channels to a more natural route, to slow the flow of water, allowing rivers to reconnect to floodplains and increase upstream floodwater storage.

Image: The Flood Hub

MOORLAND RESTORATION



Moorland restoration involves activities like reseedling and habitat management to enhance the landscape's natural ability to absorb and slow down water flow, thereby lessening the potential for downstream flooding.

Image: Wet peat land cc-by-sa/2.0 - © Alasdair MacDonald - geograph.org.uk/pl/688639

FLOOD STORAGE



The storage of floodwater upstream can alleviate flooding further downstream by reducing water flow along the watercourse. They can be used to temporarily hold floodwater during high river levels and return it back to the river once the flood peak has passed.

Image: Pool on the Tamar flood plain, Horsebridge cc-by-sa/2.0 - © Derek Harper - geograph.org.uk/pl/4565527

AGRICULTURAL LAND MANAGEMENT



Agricultural land management can enhance upstream management by using techniques that increase the land's capacity to store water. The main aim is to reduce soil compaction and improve soil quality, enabling it to retain more water and reduce runoff into watercourses.

Image: The Flood Hub

LEAKY WOODY DAMS



Structures made with natural materials, such as wood and boulders, can effectively control water levels, regulate flow, and direct water from a stream to floodplains or storage areas during periods of heavy rain.

Image: West Cumbria Rivers Trust / Leaky Dam in Dovenby, Cumbria

DUNE REGENERATION



Dune regeneration involves restoring coastal dunes for natural flood protection by planting vegetation and enhancing natural processes like dune growth.

Image: The Flood Hub

SHORT ROTATION WILLOW COPPICE



Willow to increase infiltration and evaporation, thereby reducing the volume of flood water reaching the ground and entering watercourses.

Image: Willow Plantation - cc-by-sa/2.0 - © M J Richardson - geograph.org.uk/pl/1888315

BEACH NOURISHMENT



Beach nourishment involves replenishing and restoring beaches eroded by the sea or wind, by adding sand or compatible materials. This increases the beaches storage capacity, reducing the risk of flooding.

Image: The Beach at Cley, Norfolk - cc-by-sa/2.0 - © Peter Home - geograph.org.uk/pl/24206

TREE PLANTING



Tree planting and woodland creation reduces flood risk by absorbing rainwater through their extensive root systems, increasing soil infiltration rates, stabilising slopes to prevent erosion and regulating streamflow by intercepting rainfall.

Image: The Flood Hub

MANAGED REALIGNMENT



Managed realignment, also known as coastal realignment or managed retreat, involves the planned breach or relocation of sea defences, deliberately allowing the shoreline to move further inland.

Image: New drainage channel, Medmerry Managed Realignment cc-by-sa/2.0 - © Robin Webster - geograph.org.uk/pl/5976842