

The Integrated Modelling Platform (IMP)

The IMP is a computer model, co-funded by the Welsh Government and the UK Centre for Ecology & Hydrology, to support the development of new policies focused on natural resource management, land use and agriculture by simulating the effects of policies and external factors on agriculture and the natural environment in Wales.

Scenarios

The IMP informs policy development by providing rapid, integrated assessments of the impacts of changing policy or economic scenarios on agriculture and the natural environment. It has investigated the impacts of post EU Exit trade deals on land use, agriculture and public goods and is directly supporting the development of Welsh Government's Sustainable Farming Scheme (SFS).



Llywodraeth Cymru
Welsh Government

The IMP simulates...

Impacts of agriculture on ecosystem services based on land use and management, climate and other drivers, e.g. GHG emissions from livestock

Optimised short-term farm management changes based on constrained profit maximisation or weighted multiple objectives for current farm types

Long-term agricultural changes by comparing the profitability of alternative farm types and the constraints for change

Water quality changes based on agricultural losses of sediment and pollutants

Natural capital assessment, the monetary valuation for changes in carbon/GHGs, water quality and air quality

Air quality changes and their subsequent health impact based on changes in air pollutant emissions and their uptake by trees, which result from land use change

Changes in bird and plant species abundance based on land use and management, climate and other drivers

Changes in forest timber production, economics and carbon accounting for a range of forest types, according to tree species suitability, forest management and site conditions

