

The Potential Economic impact of Saline Flooding on Lincolnshire Agriculture and the Food Industry

Coastal defence on the Lincolnshire coast has been shown to be critically important in securing the future of Lincolnshire's largest industry, the agrifood supply chain. Agriculture and Food from *farm to fork* employs over 100,000 people in Lincolnshire, 24% of all jobs, and generates 21% of the area's economic value.

With 45% of Lincolnshire in the flood for either coastal or fluvial flooding, water management is essential. Work has shown that over 108,000 hectares of farmland are in flood risk zone 3, which potentially exposes them to the risk of coastal salt water flooding.

Whilst it is not anticipated that all these areas would be flooded in any single event, the economic value of this area of farmland is to support over 3,300 direct jobs in agriculture and £100m of Gross Value Added (GVA). However, agriculture is only the first part of the food supply chain and if the potential impacts on food processing, logistics and marketing are added the value of food chain economic production protected by coastal defence rises to over £550m of GVA and 7,600 jobs.

Further indirect and induced economic effects, through spending by those employed in agriculture and food production in the wider economy, increases the potential economic value protected further to £660m of GVA and over 9,100 jobs.

The work has also modelled a series of smaller local sea defence breaches in East Lindsey, Boston and South Holland districts. Even at this level, which is much more likely to occur, the work shows that the impacts can be significant with or example a 3,500 Hectare breach in the coastline near Boston leading to a first year reduction in agricultural output of £4.3m of GVA and 143 jobs. Looking at the whole supply chain and allowing for indirect and induced impacts this scale of breach would reduce local economic GVA by £29m and reduce employment by 400 jobs.

There is significant uncertainty about how businesses would react to these type of breach events and the answer probably depends on their perception of future risks, whether they survive the first event (in physical and financial terms) and critically also the response of the supply chain. A major risk is perceived to be that 'tipping points' in terms of business viability could be reached if one of more breaches occurred, where significant supply chain infrastructure such as packing plants were either directly flooded or affected by reduced supplies and that once the businesses closed it would prove uneconomic for a new entrant to replace the lost capacity.

The work shows that many business, employees and the wider community are very dependent on continued coastal defence.

Martin Collison

Collison and Associates Limited, Honeysuckle Cottage, Tilney All Saints, Kings Lynn, UK, PE34 4RW
+44 (0) 1553 828 405, +44 (0) 7802 480 848

Email: martin@collisonassociates.co.uk

Web: www.collisonassociates.co.uk