

## **FEWSION Supply Chain: Science Animated**

New York City has global supply chains which allow it to source and supply goods and services around the world. The FEWSION Project provides the first data and visualization of supply chains for each community in the U.S. FEWSION is a supply chain database for U.S. communities that uses real-life data to map the vulnerabilities and environmental footprints of supply chains as well as their resilience.

For example, the algorithms in FEWSION can track the flow of food from farm to table through several steps for groceries, meat, bread, milled grain, and raw agricultural commodities.

We can use FEWSION to follow the journey of fresh produce such as lettuce and tomatoes from farms far away from New York in the Central Valley of California. Once harvested, the foods move on to a food processing plant. Here, raw agricultural products undergo manufacturing to transform them into the fruit and vegetables you see at the grocery.

Once the largest sources of grocery distribution for the New York area is New Jersey. Other distributors are in Florida, the West Coast, and along both sides of the U.S.-Mexico border. The food is then redistributed and sent along on the final leg of its journey to restaurants or grocery stores in New York.

Different food products have different supply chain journeys. For example, beef is likely to originate from mid-Western farms in feed lots with food processing in Chicago, and pork and poultry come mostly from the South. Using the FEWSION interface, we can see that dairy products travel a much shorter distance from farm to table.

The FEWSION model can also be used to show us the energy, water, or greenhouse gas footprints of the food supply.

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